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Since the 1960s, social science research has distinguished technological from natural disasters. Empirical evidence on disaster-related stress, social impacts of disasters, and risk has advanced our understanding of natural and technological disasters. However, there remains a critical need for synthesis of key concepts to advance theoretical development. This dissertation explores the capacity of social capital theory to integrate important conceptual elements of technological disaster research.

Focusing on the community of Cordova in Prince William Sound, Alaska, this research examines persistent social impacts of the 1989 *Exxon Valdez* oil spill (EVOS). Employing a mixed-method approach to explore relationships between social capital and existing technological disaster concepts, I analyze primary qualitative data collected through in-depth personal interviews and participant-observation, as well as extant quantitative data on social and psychological impacts of the EVOS.

This analysis reviews different conceptualizations of social capital, highlighting issues related to the following concepts: (1) the ecological-symbolic perspective; (2) renewable resource community; (3) recreancy; (4) collective trauma; (5) corrosive community; (6) lifestyle and lifescape change; (7) ontological security; and (8) secondary disasters. Research findings suggest that social capital theory integrates existing research on technological disasters. Findings also suggest that the EVOS initiated a social capital loss spiral, hindering Cordova's ability to take effective collective action to address local social and economic issues. Social capital loss spirals are related to: (1) individual stress and collective trauma, (2) a corrosive community, and (3) changes in lifestyle and lifescape. Although Cordovans do not attribute all of the community's ills to the EVOS, narratives described how initial social impacts depleted stores of social capital that have yet to recover. From this perspective, diminished social capital is a secondary disaster.

Communities experiencing technological disasters can employ social capital theory to enhance recovery by focusing on efforts to rebuild trust, associations, and norms of reciprocity. Conceptualizing social impacts using language of social capital theory can: (1) reduce stigma; (2) enhance survivors' beliefs about their ability to *do* something to restore social capital; and (3) improve opportunities for broader public support and policy change. Finally, social capital theory holds promise for natural disaster research.

## DEDICATION

This dissertation is dedicated to the people of Cordova, Alaska and their indomitable spirit and determination to weather the ongoing impacts of the *Exxon Valdez* oil spill.

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# CHAPTER I

## INTRODUCTION

### 1.1 Introduction

On March 24, 1989, a technological disaster forever changed the natural and social environments of Prince William Sound, Alaska. At 12:04 a.m., less than three hours after leaving the Port of Valdez, the supertanker *Exxon Valdez* struck Bligh Reef – a well-marked navigational hazard in the Valdez Arm. Twenty-two minutes later, the ship’s captain, Joseph Hazelwood, radioed the Port of Valdez Traffic Center and said, “Evidently, we’re leaking some oil.” Within five hours almost 11 million gallons of black crude oil from Alaska’s North Slope boiled into the pristine waters of the Sound. Ultimately, the oil slick contaminated 44,000 square kilometers including more than 1,900 kilometers of Alaskan coastline from Bligh Reef to the village of Chignik on the Alaskan Peninsula. Now referred to as the *Exxon Valdez* oil spill (EVOS), this incident remains the largest oil spill in North American history and internationally ranks among the 60 largest.

Although there were six contingency plans in place – including local, regional, and state plans – they proved seriously inadequate to respond to the EVOS. Alyeska Pipeline Service Company (Alyeska), the party primarily responsible for responding to the oil spill, was unprepared, as documented in the National Response Team’s report to

the President (National Response Team 1989).<sup>1</sup> Moreover, response plans did not consider worst-case scenarios and equipment proved inadequate to contain a spill the magnitude of the EVOS. Fifteen years later, impacts of this human-caused disaster continue to affect the delicate balance of Prince William Sound's (PWS) bioregion.<sup>2</sup>

Ongoing litigation is a frequent reminder of that fateful day, as Exxon Corporation (now ExxonMobil Corporation) continues to appeal rulings regarding punitive damages handed down by the federal judge in the case, the Honorable H. Russel Holland. Since the initial jury decision awarded \$5 billion to the plaintiffs in September 1994, the case has gone back and forth between the U.S. District Court in Anchorage and the Ninth Circuit Court of Appeals in San Francisco. Most recently, on January 28, 2004, ExxonMobil was ordered to pay \$6.75 billion to plaintiffs, a decision the company immediately indicated it would appeal (U.S. District Court, Alaska, 2004).

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<sup>1</sup> Alyeska operates the Valdez terminal. At the time of the EVOS, there were seven oil companies that owned shares in Alyeska; they were referred to as the "Seven Sisters." These companies included BP Exploration, ARCO Pipeline Company, Exxon Pipeline Company, Mobil Alaska Pipeline Company, Amerada Hess Pipeline Company, Phillips Pipeline Company, and Union Alaska Pipeline Company (*The Exxon Valdez Oil Spill: A Report to the President*). As of the writing of this dissertation, Alyeska is owned by a consortium of five oil companies (their holdings are listed in parentheses): BP Pipelines (Alaska) Inc. (46.93 percent); Phillips Transportation Alaska, Inc. (28.29 percent); ExxonMobil Pipeline Company (20.34 percent); Unocal Pipeline Company (1.36%); and Williams Alaska Pipeline Company, L.L.C. (3.08 percent) (<http://www.alyeska-pipe.com/about.html>).

<sup>2</sup> "A bioregion is part of the earth's surface whose rough boundaries are determined by natural rather than human dictates, distinguishable from other areas by attributes of flora, fauna, water, climate, soils, and landforms, and the human settlements and cultures those attributes have given rise to" (Sale 1991:78).

## 1.2 The Social Problem

Statistics indicate disasters are common occurrences (Green 1996; Green and Lindy 1994). Worldwide, between 1993 and 2002, more than 623,000 people died in 5,402 natural and technological disasters (Walter 2003). Of these, nearly 93,000 deaths were attributed to 2,467 technological disasters (Walter 2003).<sup>3</sup>

In *Normal Accidents*, Perrow (1984) suggests technology in modern societies creates “error-inducing systems.” Beck (1992) and Giddens (1990, 1991) contend risk is tied to conditions of late modernity, focusing on “dramatic” forms of risk such as nuclear annihilation. Freudenburg (2000) argues that sociologists should be most concerned with addressing risks associated with increasing specialization, division of labor, and “recreancy,” which he defines as “the failure of experts or specialized organizations to execute properly responsibilities to the broader collectivity with which they have been implicitly or explicitly entrusted” (p. 116).<sup>4</sup> As Erikson (1976a) comments, “The real danger is that, like some grotesque variation on the Peter Principle, technological progress seeks its own level of incompetence.... Celebrated advances in science and technology ... have added decisively to man’s catalogue of potential catastrophes” (p. 253). More generally, technological disasters are a “new species of trouble” (Erikson 1994).

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<sup>3</sup> According to Freudenburg (1997): “The simplest rule of thumb for categorizing disasters as natural or technological . . . has to do with the triggering event: *if the triggering event could have taken place even if no humans were present* . . . then the disaster is most appropriately seen as a ‘natural’ one. By contrast, if the triggering event was one that inherently required human action . . . then the disaster is most appropriately seen as technological” (pp. 24-5). Further conceptual distinctions between natural and technological disasters are presented in Chapter II of this dissertation.

<sup>4</sup> Recreancy is discussed in detail in Chapter II of this dissertation.

It seems highly probable that the threat and reality of technological disasters will continue. Social scientists are uniquely positioned to foster an increased understanding of the intricacies associated with social causes and consequences of technological disasters. By viewing technological disasters as a social problem (e.g., Picou, Gill, and Cohen 1997), there are opportunities to anticipate and prepare for events like Love Canal, Three Mile Island, and the *Exxon Valdez* oil spill. Equipped with this knowledge, there is at least potential to ameliorate impacts of technological disasters. Although it is highly unlikely that any “evidence” provided through empirical research would keep technological disasters from occurring, it is possible research efforts and continued theory development can have policy implications for risk assessment, risk management, and applications in supporting community recovery, rehabilitation, and transformation in the aftermath of technological disasters.

### **1.3 Disciplinary Issue**

A comprehensive review of research on technological disasters reveals a critical need for synthesis and integration of several key concepts to advance theoretical development in this arena. Literature on disaster-related stress, social impacts of disasters, and risk advance our understanding of natural and technological disasters. A task remaining, however, is to develop an integrated approach to studying social and psychological impacts of disasters. A theoretical approach incorporating key concepts and theories from existing disaster, stress, and risk research literature would represent a significant contribution to the field. This dissertation employs social capital theory to

integrate that literature, demonstrating its capacity to integrate important conceptual elements of natural and technological disaster research emerging in the past four decades. Although there is no single definition of social capital, broadly the term refers to “social networks, the reciprocities that arise from them, and the value of these for achieving mutual goals” (Schuller, Baron, and Field 2000:1).

An extensive review of literature reveals, to date, no published studies addressing technological or natural disasters using social capital theory. Freudenburg and Gramling (1992) briefly mention social capital in their discussion of capital depreciation with respect to community level impacts of technological and environmental change associated with development – not technological or natural disasters. They discuss social capital in tandem with human capital, referring jointly to these as “skills, knowledge, experience, teamwork, [and] networks of supply and distribution,” and suggest a need to consider anthropogenic elements of productive capacity (p. 946). Dyer (1993) cites Freudenburg and Gramling (1992), indicating in his conclusion that “Preventing or mitigating cultural chaos entails a valuation of the human and social ‘capital’ that drives natural resource community productivity” (p. 85). Importantly, neither of these works elaborates on potential impacts of technological disasters on social capital, neither suggests or discusses relationships between social capital and technological disaster concepts or theories, nor does either incorporate social capital literature.

Conceptualizations of social capital are concerned with trust, associations, and norms of reciprocity among groups and individuals. As discussed in Chapter II of this dissertation, each of these concepts is explicit and implicit in extant technological disaster research. Applying this perspective to social impacts of the EVOS not only integrates

various aspects of technological disaster research, but also may further illuminate potential for using social capital in natural disaster research and other forms of community studies.<sup>5</sup>

#### **1.4 Cordova, Alaska: A Renewable Resource Community**

The focus of this dissertation research is the renewable resource community (RRC) of Cordova, located on southeastern Prince William Sound, Alaska. As defined by Picou and Gill (1996<sup>6</sup>), “An RRC is a population of individuals who live within a bounded area and whose primary cultural, social, and economic existences are based on the harvest and use of *renewable* natural resources” (p. 881, italics added; also see Gill 1994; Gill and Picou 2001). Although every community is reliant upon its biophysical environment, the extent to which RRCs are dependent upon biophysical resources surpasses that found, for example, in an urban area. First applied to communities studied in the aftermath of the *Exxon Valdez* oil spill, the RRC model ties culturally based community activities to seasonal cycles in the ecosystem (Dyer, Gill, and Picou 1992; Gill 1994; Gill and Picou 1997, 2001; Picou and Gill 1997; Picou et al. 1992).<sup>7</sup> A theoretical extension of the ecological-symbolic perspective (Kroll-Smith and Couch

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<sup>5</sup> According to Woolcock (1998) social capital theory has been applied to social theory and economic development; families and youth behavior problems; schooling and education; community life; work and organizations; democracy and governance; and general cases of problems of collective action.

<sup>6</sup> The 1996 article by Picou and Gill was revised and reprinted in *The Exxon Valdez Disaster: Readings on a Modern Social Problem* (Picou, Gill, and Cohen 1997, Chapter 12). From this point forward, the updated 1997 article will be referenced, as it includes a more detailed methods section.

<sup>7</sup> The RRC concept is a refinement of the natural resource community (NRC) model, which demonstrates community dependence on natural resources (Dyer, Gill, and Picou 1992). A distinction between NRCs and RRCs has emerged based on the notion of *renewable* natural resources.

1991a, 1991b, 1993a, 1993b), the RRC concept offers a sociologically based approach for explaining chronic sociological and psychological stress associated with technological disasters (Gill 1994; Gill and Picou 1997, 1998, 2001; Picou and Gill 1997; Picou et al. 1992). The following sections provide a brief overview of Cordova.

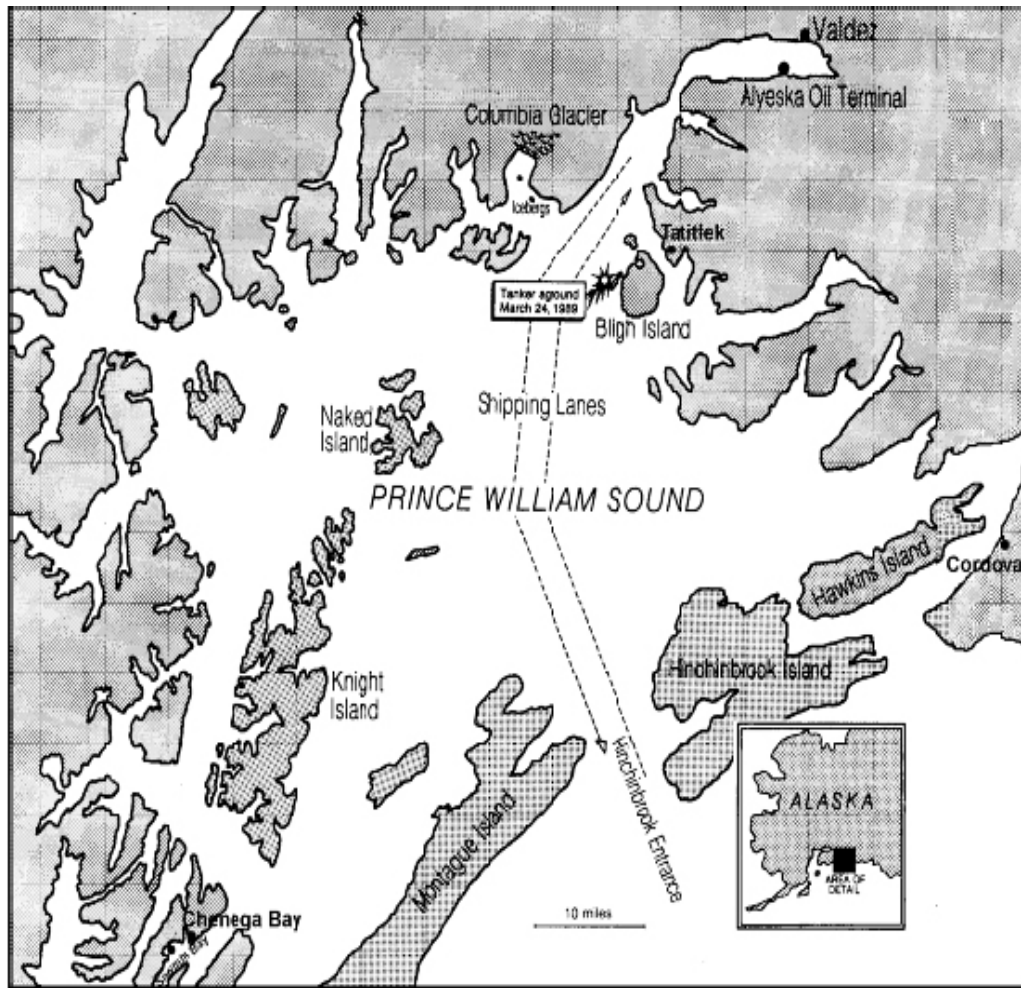
#### 1.4.1 Cordova: Location

Cordova is a coastal community located on southeastern Prince William Sound between Orca Bay and the Gulf of Alaska (See Figures 1.1 and 1.2). The town is primarily situated on the “gentle slope of Mt. Eyak,” facing Hawkins Island in Orca Inlet (Payne 1985). The community is bounded by Eyak Lake to the east, Orca Inlet to the west, and Mt. Eccles to the south. The Chugach National Forest surrounds much of Cordova (Reynolds 1993). The Heney Mountain Range to the southeast, along the coastline, separates the 400 square mile Copper River Delta region of freshwater marshes and tidal flats from Cordova. The Copper River, as well as a number of other rivers and streams, feed into the delta. Offshore sand bars separate the Copper River Delta from the Gulf of Alaska, with a series of channels cutting through the tidal area between the outer bars and the shore (Payne 1985).<sup>8</sup>

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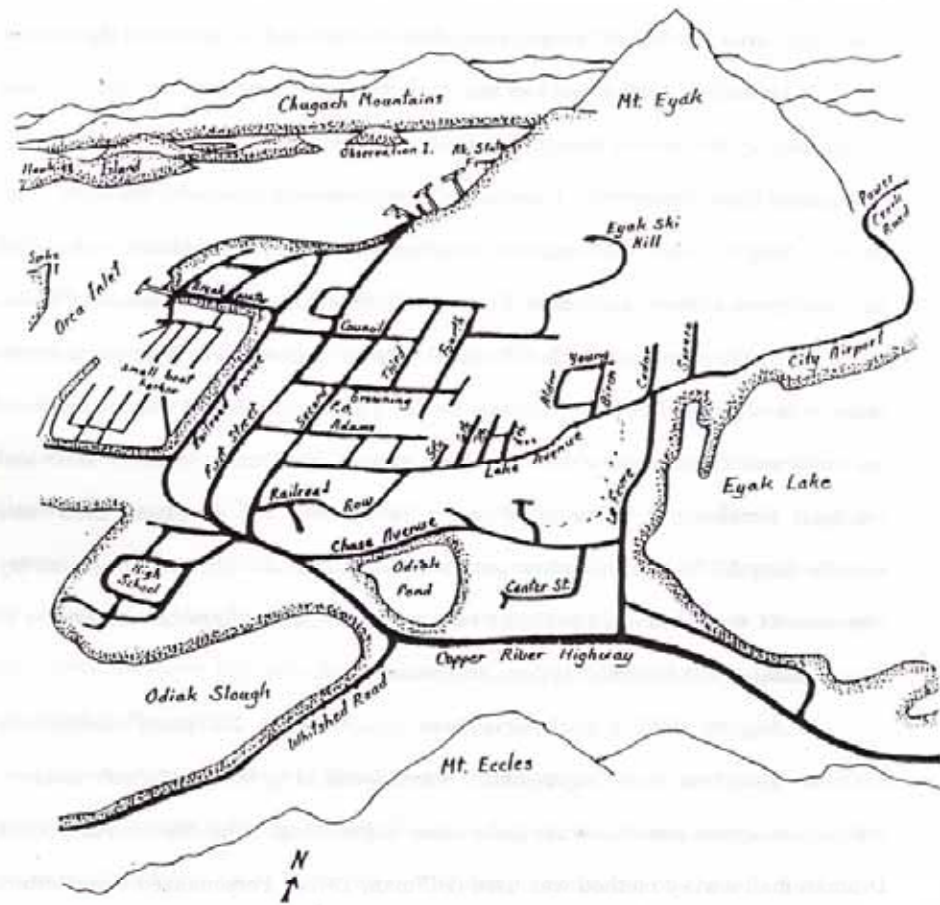
<sup>8</sup> It is this area that is referred to as the “Flats,” a prime salmon fishing region. Although the largest of the sand bars remain from season to season, there are subtle changes in the Flats from year to year. Because of the sand bars, tides, and often-harsh weather conditions, the Flats are considered one of the most dangerous fishing regions in the world.





Source: <http://www.evostc.state.ak.us/>.

Figure 1.1 – Map of Prince William Sound and *Exxon Valdez* Grounding Location



Source: Picou and Gill (1995c).

Figure 1.2 – Map of Cordova, Alaska

### 1.4.2 Cordova: 1906 to 1959<sup>9</sup>

Founded in 1906 by railway developer Michael J. Heney, this coastal community essentially replaced two cannery and fishing-based communities: Orca and the Native Village of Eyak.<sup>10</sup> Heney established Cordova – named after nearby Cordova Bay (now Orca Bay) – as a railway terminus for his “Copper River Railway” route to the Bonanza Copper Mines, almost 200 miles inland. In 1907, the Morgan-Guggenheim Syndicate purchased Heney’s railroad, renaming it the “Copper River and Northwestern Railway (CR&NWR).” Two years later, the Town of Cordova officially incorporated; by July 1909 the town had 10 stores, 2 hotels, 2 lumber yards, 3 churches, 10 saloons, a school, and a newspaper. At that time, the town occupied one-quarter square mile (Arvidson 1984; Lethcoe and Lethcoe 2001). On April 8, 1911, the first train load of copper ore – consisting of 32 cars – pulled into Cordova (Lethcoe and Lethcoe 2001). Lethcoe and Lethcoe (2001) surmise, “Not until the construction of the Trans-Alaska Pipeline in the 1970s would Alaska witness a comparable achievement by an industry similarly motivated [by profit]” (p. 84).

The CR&NWR made Cordova the most important town in southeastern Alaska. For 27 years, the community enjoyed benefits of being the railhead for the route to the Kennecott Copper Mines, particularly during WWI when demand for copper ore was high. However, on November 14, 1938, the last train from the mines pulled into Cordova.

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<sup>9</sup> For a more comprehensive history of Cordova and other communities in Prince William Sound, see Lethcoe and Lethcoe (2001).

<sup>10</sup> In 1900, the populations of Orca and the Village of Eyak were 173 and 200, respectively. After the founding of Cordova, the Village of Eyak was torn down and the lumber used to build the new town of Cordova. By 1910, the population of Orca had decreased to 141 and Cordova’s population was 1,152 (Lethcoe and Lethcoe 2001).

The effect might have been devastating to the community, were it not for the fact that by then the fishing industry was more fully developed. Only 20 percent of the town's workforce was employed by the railroad in 1938. At that time, more than half of the approximately 1,000 fishermen working in PWS and the Copper River Delta were Cordova residents. Seasonally, Cordova canneries employed 1,500 workers. Thus, fishing became the town's economic mainstay and has remained so to this day (Arvidson 1984; Lethcoe and Lethcoe 2001).

Following the closure of the railroad, the Alaska Steamship Company also continued to carry passengers and freight to and from the Cordova port. Other entities, especially the U.S. Coast Guard and the U.S. Forest Service, provided additional support to the community. Public works programs developed under the Franklin D. Roosevelt presidential administration (including the Civil Conservation Corps and the Works Progress Administration) resulted in a number of projects in Cordova between 1935 and 1937, including construction of a new breakwater and dredging of the boat harbor (Lethcoe and Lethcoe 2001). In 1959, following Statehood, "Cordova voters approved a Home Rule form of government for the City of Cordova" (Arvidson 1984:v).<sup>11</sup>

### 1.4.3 Cordova: 1960 to the Present

Since 1959, a number of developments and events have served as social, environmental, and economic change agents in PWS. Among the most prominent of these were the 1964 Great Alaskan earthquake; discovery of oil at Prudhoe Bay; the subsequent

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<sup>11</sup> "Home Rule" provides maximum local self-government; in Alaska, there are 145 city governments. Of these, only 12 are "Home Rule" (<http://www.dced.state.ak.us/dca/pub/Homerule.pdf>).

building of the Trans-Alaska Pipeline from the North Slope to the Port of Valdez; state and federal legislation – including the Alaska Native Claims Settlement Act (ANSCA) – and the EVOS (Lethcoe and Lethcoe 2001). These events impacted communities around PWS, including Cordova, in a variety of ways. Cordova also experienced more localized challenges during this period.

In the early 1960s two major events impacted the town – a fire and an earthquake. Each of these disasters serves as a benchmark for Cordovans old enough to remember them. On May 2, 1963, a fire tore through the block between First and Second Streets and Browning and Council Avenues in downtown Cordova. This was the worst fire in Cordova’s history; 15 buildings were gutted, including several built in 1908 when the town incorporated. Immediately, the town began to rebuild and by the summer of 1966 businesses had reopened (Arvidson 1984).<sup>12</sup>

Less than a year after the devastating fire, on Good Friday, March 27, 1964, an earthquake rocked PWS, sending shocks over an area of 500,000 square miles (Lethcoe and Lethcoe 2001).<sup>13</sup> Tsunamis in the aftermath of the earthquake killed many people and devastated infrastructures of several communities. The Native Village of Chenega was the hardest hit, losing 30 percent of its population (23 people) in just a few minutes. All that remained of the community was the school, the post office, and one house.<sup>14</sup> Fortunately, the earthquake did little structural damage to Cordova, though it did severely

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<sup>12</sup> Additional fires in downtown Cordova occurred in autumn of 1951 and 1964. The 1951 fire demolished the Empress Theater and the 1964 fire destroyed a laundry and market.

<sup>13</sup> Ironically, the *Exxon Valdez* oil spill also occurred on Good Friday, 25 years later.

<sup>14</sup> Surviving Chenega residents were temporarily relocated to the Native Village of Tatitlek.

impact the fishing industry. Because the quake raised the town by six feet, making the harbor too shallow, it had to be dredged once again and rebuilt. Once accessible to large seine boats, after the earthquake the Copper River was suitable for fishing only by drift netters. Furthermore, clam beds in Orca Inlet were destroyed, as were several salmon spawning habitats (Lethcoe and Lethcoe 2001).

Since the railroad closed in 1938, Cordova's economy has revolved around commercial fishing. Studies in the 1970s indicated almost half the jobs in the City of Cordova were associated with fishing (Northern and Western Gulf of Alaska Local Socioeconomic Baseline 1979). Moreover, "84.9 percent of all of the business efforts in Cordova was directly dependent on the fishery resources for its well-being" (Mullins 1972:10).

Introduction of a Limited Entry Program by the Alaska Legislature in 1973 significantly affected commercial fishing, and hence the economies of Cordova and PWS. Permits fixed the number of individuals who could fish in a given geographic area, target species, and gear groups. As Payne (1985) notes, "It is similar to a taxi or liquor license" (p. 72).<sup>15</sup> The Limited Entry Program is administered by the Alaska Commercial Fisheries Entry Commission (CFEC), a "regulatory and quasi-judicial agency designed to establish limited-entry requirements and ceiling on the maximum number of participants in the state's commercial fisheries" (Cohen 1997:143). Prior to limited entry, anyone could fish the waters of the Sound for any species of fish. Initial allocation of limited

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<sup>15</sup> For detailed information about permits, refer to the Alaska Department of Fish and Game, Commercial Fisheries Division's web site: <http://www.cf.adfg.state.ak.us/>. Also see the Alaska Commercial Fisheries Entry Commission web site: <http://www.cfec.state.ak.us/>. There are dozens of different types of permits according to gear type, resource type, and area.

entry permits was according to a points system based on previous participation in a given fishery. Limited entry required fishermen to apply for permits to harvest specific species in designated areas, dramatically changing the nature of fishing in the Sound.<sup>16</sup> Presently, across Alaska, almost all of the commercial salmon, herring, and shellfish fisheries are governed by limited entry (Cohen 1997).

Essentially, limited entry created a situation in the 1970s where a dollar value was placed on the right to fish in PWS (and elsewhere in Alaska). Limited entry permits can be bought and sold, like stocks or bonds. Fishing permit values fluctuate based on “economic fortunes of a fishery” (Cohen 1997:143). Despite attempts by the State of Alaska and local fishermen to reserve permits for state residents, ownership is available to non-Alaskans.<sup>17</sup>

Another significant influence on fishing in Alaska was the establishment of the Fisheries Rehabilitation, Enhancement, and Development (FRED) Division of the Alaska Department of Fish and Game in 1971 (Lethcoe and Lethcoe 2001). In response to poor returns of wild chum and pink salmon in PWS in the 1950s and early 1970s, the non-profit Hatchery Act was passed in 1974. The goal of the program was to increase hatchery production without harming wild stocks. That same year, the Prince William Sound Aquaculture Corporation (PWSAC) was established.<sup>18</sup> As a result of hatchery

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<sup>16</sup> For additional information regarding Limited Entry, see Cohen (1997).

<sup>17</sup> The U.S. Constitution did not allow such restrictions.

<sup>18</sup> PWSAC, pronounced “pizwack,” is a private non-profit corporation founded in 1974 by a local commercial fishermen's organization. The purpose of the corporation is to optimize the value of the salmon resources produced in Prince William Sound for all user groups. With headquarters in Cordova, PWSAC operates four remote salmon hatcheries in Prince William Sound and one on the Copper River system in Paxson. Approximately 600 million salmon fry and smolt are produced for release into Pacific waters. The

construction, pink salmon harvests increased dramatically in the late 1980s (Fried and Windisch-Cole 1999).

Significant factors negatively influencing the fishing industry in PWS since 1989 are farmed salmon and a general market decline, which coincided with the EVOS.<sup>19</sup> In the 1970s and 1980s, commercial fishermen in PWS enjoyed a dominant status in the world's salmon market (Gilbertsen 2003). In 2002, more than 81 percent (330 of 407) Cordova-Valdez Census Area fishing permit holders reported Cordova as their residence (<http://www.cfec.state.ak.us/>). An additional 74 percent of crewmembers in this area indicated Cordova as their residence (284 out of 385). In 1989, the average value of Area E – which includes Prince William Sound and the Copper River Delta – salmon purse seine permits was \$236,333. The average value of these permits in 2003 dropped to \$17,200. PWS salmon drift gillnet permit values decreased from an average of \$141,115 in 1989 to \$35,725 in 2003. The average price of a PWS set gillnetting permit in 1989 was \$64,167; this dropped slightly in 2003, to an average of \$59,608. Permits to fish for herring roe using a purse seine in PWS decreased from an average price of \$245,000 in 1989 to \$21,158 for 2003 (<http://www.cfec.state.ak.us/>) (See Figure 1.3).<sup>20</sup>

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returning adult salmon benefit commercial, sport fishing, private, and subsistence users” (see <http://pwsrca.org/Members/PWSAC.html>).

<sup>19</sup> For a discussion of additional influences on the PWS fishing industry see Cohen (1997).

<sup>20</sup> Declines in permit values and their relationship to the EVOS are discussed later in this Chapter.



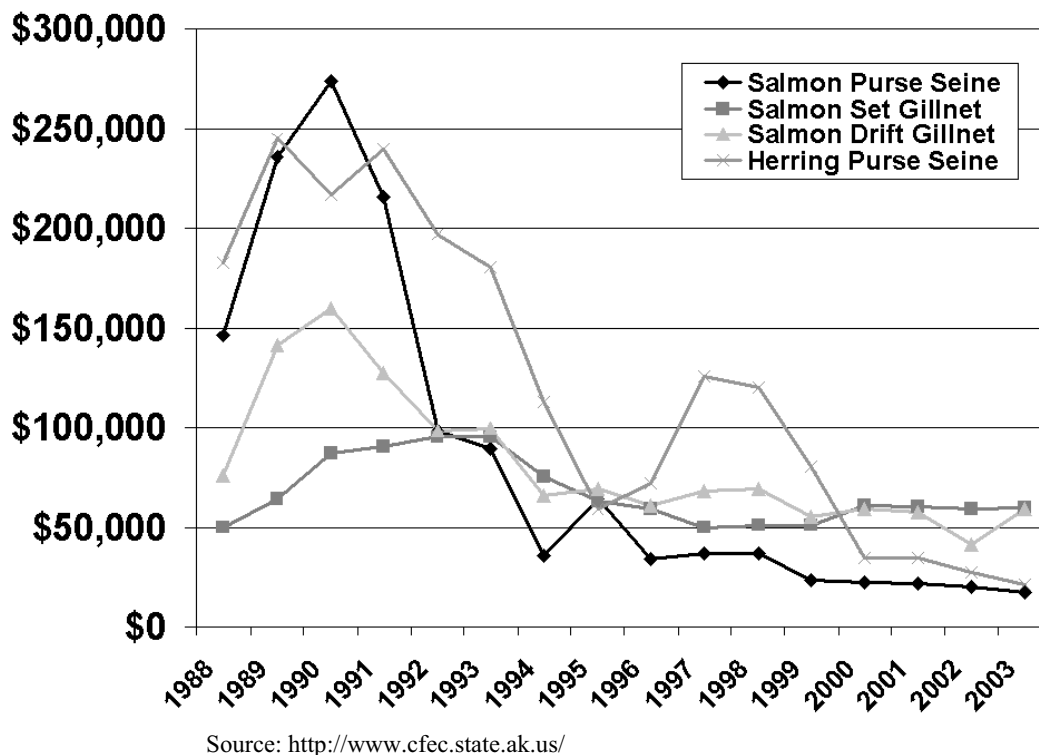


Figure 1.3 – Area E Permit Values: 1988-2003

#### 1.4.4 Cordova: Demographics

Between 1990 and 1998, the population of Cordova essentially remained the same (2,579 and 2,584, respectively) (Fried and Windisch-Cole 1999). In 2000, U.S. Census data report a similar figure – 2,571. Based on State Revenue Sharing Program data, Cordova's population declined between 2001 and 2004 from 2,571 to 2,372 (see <http://www.dced.state.ak.us>). Residents of Cordova are 54.4 percent male and 45.6 percent female, with a median age of almost 37. The population is approximately 71 percent white and just over 10 percent Alaska Native or American Indian; almost 9 percent of

Cordovans are Filipino (U.S. Bureau of the Census, Census 2000). The average household size is 2.5, with an average family size of 3.1.

Almost 89 percent of Cordovans over the age of 25 (n=1,581) have a high school education or higher. Just over 21 percent have a bachelor's degree or higher (U.S. Bureau of the Census, Census 2000). In a report profiling the economy of PWS 10 years after the EVOS, Fried and Windisch-Cole (1990) unequivocally state, "Cordova's economy depends on the Sound. Commercial fishing is the lifeblood of the community" (p. 3). Indeed, more than one-third of the community's work force is directly employed in fish harvesting or processing (Fried and Windisch-Cole 1999). In 2000, of Cordova's employed civilian population 16 years of age or older (n=1,154), more than half were private wage and salary workers, almost one-third were employed by the government, and the remainder were self-employed workers or unpaid family workers. The 1999 median annual Cordova household income was \$50,114; median family income was \$65,625. Per capita income in Cordova in 1999 was \$25,256 (U.S. Bureau of the Census, Census 2000). Data for 1999 show 26 Cordova families and 182 individuals living below the poverty level (U.S. Bureau of the Census, Census 2000).

### **1.5 The Context of the Present Research**

Since 1989, scientists have been disputing not only environmental impacts of the EVOS, but economic, social, and psychological impacts, as well. Research on the EVOS may generally be classified according to (1) ecological impacts, (2) economic impacts, and (3) social and psychological impacts. The following sections provide a brief summary of ecological and economic impacts of the spill, as well as a more detailed

discussion of research addressing social and psychological impacts associated with the EVOS. This section concludes with a short overview of more than a decade of litigation associated with this technological disaster, noting the status of the litigation as of the writing of this dissertation.

#### 1.5.1 Ecological Impacts of the EVOS

The EVOS dramatically altered the ecosystem of PWS, which has yet to recover (Peterson et al. 2003, Short et al. 2004). Oiling and subsequent treatments of shoreline habitats resulted in “intense environmental perturbation” (Peterson 2001). According to estimates, 250,000 seabirds, 144 bald eagles, 4,400 sea otters, and 300 seals; 20 whales also died from initial impacts of the crude oil (Spies et al. 1996), as well as billions of salmon and herring eggs (see <http://www.evostc.state.ak.us/>).

Disturbance of the ecology of PWS persists (Peterson et al. 2003; Short et al. 2004). Twelve years after the EVOS, oil containing toxic hydrocarbons was found on 78 of 91 beaches surveyed (Short et al. 2004). Research indicates that 100 percent of subsurface oil on these beaches was from the *Exxon Valdez*. More than 90 percent of surface oil was from the *Exxon Valdez*; Monterey Formation oil deposited following the 1964 earthquake accounted for the remaining 10 percent of surface oil (Short et al. 2004). According to Short et al. (2004), “Although the volume of oil has declined considerably, our study suggests the area of oiled beach has probably changed little since 1992” (p. 24). Peterson et al. (2003) determined, “Unexpected persistence of toxic subsurface oil and chronic exposures, even at sublethal levels, have continued to affect wildlife” (p. 2082).

Nevertheless, ExxonMobil<sup>21</sup> officials continue to insist long-term environmental impacts are minimal and of little consequence (Rosen 2003).

As of August 2002, species identified as “not recovering” in PWS include pacific herring, cormorants, common loon, harbor seal, harlequin duck, and pigeon guillemot. Injured resources classified as “recovering” include clams, intertidal communities, killer whales, mussels, marbled murrelet, various wilderness areas, and sediment. Resources identified as “recovered” are bald eagles, black oystercatchers, common murre, pink salmon, sockeye salmon, river otter, and archaeological resources (see <http://www.evostc.state.ak.us/>).

### 1.5.2 Economic Impacts of the EVOS

In the immediate aftermath of the EVOS, activities associated with spill cleanup created “a short but highly profitable period” for many of the region’s residents (Cohen 1997:154). In the early 1990s, southcentral Alaska’s economy began to decline. Record-low ex-vessel prices<sup>22</sup> in 2002 represented a decline of more than 85 percent since 1988 (Gilbertsen 2003). In 1980, farmed salmon accounted for just 1 percent of global salmon production; by 2002, farmed salmon had captured more than 60 percent of the international market (Gilbertsen 2003). Coupled with other economic conditions in the fishery, this significantly impacted the Cordova fishing fleet. According to Cohen’s (1997) assessment,

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<sup>21</sup> In 1999, Exxon Corporation merged with Mobil, forming ExxonMobil Corporation.

<sup>22</sup> Ex-vessel prices refer to the price of fish per pound at the point of sale from a commercial fisherman to a tendering boat or wholesale operator.

the connection between the oil spill and longer-term regional economic malaise is doubtful. The powerful forces of market realignment were far more potent than the [EVOS] in shaping competitive conditions and reducing Alaska's commanding international position as a supply source. (P. 154)

Perhaps the most notable, long-term economic consequence of the EVOS and subsequent litigation activities for the PWS fishing industry has been the spill's tendency to distract commercial fishermen's attentions from broader market realities (Cohen 1997; also see Fried 1999).<sup>23</sup> Nonetheless, PWS fisheries – particularly herring and pink salmon – have struggled since the early 1990s (Cohen 1995, 1997). Notably, there were no commercial herring fishing harvests in 1989, 1994, and 1995, and limited harvests in 1993, as well as from 1996 through 2003 (Fried 1999; also see <http://www.cfec.state.ak.us>).<sup>24</sup>

### 1.5.3 Social Impacts of the EVOS

This dissertation represents a continuation of 15 years of research on social and psychological impacts of the EVOS in PWS, Alaska. Four social science research projects were initiated between 1989 and 1992 after the EVOS: (1) the “Oiled Mayors Project,” (2) the “Cordova Community Study,” (3) the “Social Indicators Study,” and (4) “An Investigation of the Sociocultural Consequences of Outer Continental Shelf Development in Alaska: Prince William Sound.” Each study employed different research

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<sup>23</sup> This idea is acknowledged by Cordovans and addressed in Chapter V of this dissertation. Arguably, however, fishermen would have preferred to have had the opportunity to address international market conditions rather than deal with environmental and social impacts of 11 million gallons of crude oil in PWS. This will be discussed further in the conclusion of this dissertation.

<sup>24</sup> For those who participated in herring fisheries, annual income losses range from 25 to 30 percent.

designs and methodologies to examine aspects of the spill's social impacts. An overview of these studies and summary of findings are presented next.

#### *1.5.3.1 Overview of EVOS Social Impact Studies*

The Oiled Mayors study (Impact Assessment, Inc. 1990) focused on 22 PWS communities that were actually oiled by the EVOS. This research, conducted in the spring and winter of 1990, utilized a mixed-method approach that incorporated a cross-sectional household survey of 11 oiled communities and 2 control communities; field interviews with key informants in each of the oiled communities; and analysis of secondary economic data. The Oiled Mayors study was designed to gather social impact data in a timely fashion for plaintiffs involved with EVOS litigation purposes. Thus, the research by Impact Assessment, Inc., ended the year after the oil spill.

The National Science Foundation, through the Natural Hazards Research and Applications Information Center at the University of Colorado, sponsored the Cordova Community Study.<sup>25</sup> Within five months of the EVOS, J.S. Picou and D.A. Gill were collecting data and conducting fieldwork in Alaska, documenting community impacts of the spill. Notably, Picou and Gill did not commence their research for purposes of

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<sup>25</sup> The initial funding came as a "quick response" grant funded prior to the EVOS in 1988. Since 1989, support for Picou and Gill's research focusing on the community of Cordova has been provided by the following organizations: "National Science Foundation (Polar Social Science Division), Natural Hazards Research and Application Information Center, Earthwatch Center for Field Studies, Prince William Sound Science Center, Social Science Research Center (Mississippi State University), College of Arts and Sciences (University of South Alabama), Cordova District Fishermen United, Cordova Fishermen Claims Office, Cordova Sound Alternatives Mental Health Center, Eyak Village, Cordova Family Resource Center, Cordova Mayor's Office, Prince William Sound Regional Citizens' Advisory Council, Oil Spill Public Information Center, Copper River Delta Institute, Valdez Mental Health Clinic, and the *Exxon Valdez* Oil Spill Trustee Council" (Picou, Gill, and Cohen 1997:xvi). Support was also provided by the Fisheries Art Collective, Santa Cruz, California (Gill 1994).

collecting data for use in litigation. Rather, unbeknown to the researchers, attorneys for EVOS plaintiffs cited their work (Picou et al. 1992) in court proceedings (Gill 2000; Picou 1996a).<sup>26</sup>

In various stages of their longitudinal study and depending on target populations, different survey methodologies were utilized to collect quantitative data, including household telephone surveys, face-to-face survey administration, and mailed surveys (See Appendix A).<sup>27</sup> Data collection in 1991 and 1992 involved three PWS communities: (1) Cordova, a renewable resource community; (2) Valdez, a non-renewable resource community; and (3) a control community, Petersburg, a renewable resource community (Gill and Picou 1998; Picou and Gill 1997). Subsequent research was limited to Cordova and Petersburg. As of the writing of this dissertation, research by Gill and Picou represents the longest running study of a technological disaster.<sup>28</sup> The study is ongoing, now incorporating measures to document social and psychological issues associated with EVOS-related litigation processes (see Picou, Marshall, and Gill 2004).

Gill and Picou's efforts to advance technological disaster research have resulted in a variety of publications including peer reviewed journal articles, book chapters, and a book (Arata et al. 2000; Dyer, Gill, and Picou 1992; Gill 1994; Gill and Picou 1997, 1998, 2001; Picou 1996a, 1996b, 1996c, 2000; Picou and Arata 1997; Picou and Gill

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<sup>26</sup> As Picou (1996a) indicates, their work has subsequently been misrepresented and in some cases confused with that of Impact Assessment, Inc.

<sup>27</sup> Other than personal observation employed to contextualize their work, Picou and Gill primarily gathered quantitative data. An open-ended comment section at the end of each survey provided limited though meaningful qualitative data.

<sup>28</sup> After the 1972 Buffalo Creek flood in West Virginia, Gleser et al. (1981) studied survivors over a period of approximately five years. Fourteen years later, Green et al. (1990a and 1990b) conducted follow-up research.

1996, 1997, 2000; Picou, Gill, and Cohen 1997; Picou et al. 1992; Picou, Marshall, and Gill 2004; Picou and Rosebrook 1993). Moreover, findings from their research have been applied to establish several mitigation programs in Cordova based on a community participation model (Picou 2000; Picou, Johnson, and Gill 2001; also see Marshall, Picou, and Schlichtmann forthcoming). Among others, Gill's (1994) and Gill and Picou's (2000) studies were cited in Judge Holland's January 2004 ruling on the punitive damages against Exxon.

The third major research project to document EVOS impacts was the 1992 Social Indicators Study of Alaskan Coastal Villages, funded by the Department of the Interior's Minerals Management Service (MMS), Alaska Outer Continental Shelf (OCS) Region. This line of inquiry expanded an existing study that was initiated in 1987, designed to capture data on exogenous factors influencing village economies, societies, and households. The MMS-funded research for the *Exxon Valdez* area project collected ethnographic data in 1989 in Chignik, Cordova, Karluk, Kenai, Kodiak, Old Harbor, Seldovia, Tatitlek, Tyonek, and Valdez (Endter-Wada et al. 1993; Reynolds 1993). The report by Reynolds (1993), which is included in Endter-Wada et al. (1993), focused on Cordova where researchers gathered qualitative data between February 11 and March 13, 1991. The Cordova sample consisted of 24 randomly sampled key informant interviews. In addition, a number of institutions were purposefully selected for inclusion in the



interview process (e.g., representatives from City Government, Law Enforcement, Fish Hatcheries, Education, Financial Institutions, Private Businesses).<sup>29</sup>

Finally, though not solely focused on social impacts of the EVOS, “An Investigation of the Sociocultural Consequences of Outer Continental Shelf Development in Alaska: Prince William Sound” (Fall and Utermohle 1995) provides additional valuable information pertinent to the EVOS. The overall project – designed to examine long-term social and cultural consequences of developing Alaska’s OCS – was conducted beginning in 1992 under the auspices of the Division of Subsistence of the Alaska Department of Fish and Game through a cooperative agreement with the MMS. In 1992, 1993, and 1994, the research team collected data through face-to-face interviews using a harvest survey questionnaire and a social effects questionnaire. Seventeen communities in PWS, Cook Inlet, the Kodiak Island area, and the Alaskan Peninsula considered to be most affected by the EVOS were included in the study, as well as four control communities in the Arctic region (Fall and Utermohle 1995). Findings of this research are particularly of interest with respect to subsistence activities.

#### *1.5.3.2 Summary of EVOS Social Impact Studies Findings*

Generally, EVOS social impact studies address three levels of impacts associated with the spill (Picou, Formichella, and Arata forthcoming). As Picou, Formichella, and Arata (forthcoming) note, these effects are interrelated rather than independently occurring phenomena. Research on macro or social structural impacts includes measures

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<sup>29</sup> There was some overlap between key informant interviews and institutional interviews, e.g., two key informants each provided two institutional interviews.

of disruptions to economic, civic, and occupational structures of a community. Studies of cultural effects or middle-range impacts consider how lifestyles of community residents were impacted by the EVOS. Finally, examination of micro or individual level impacts consists of increased family stress, mental distress, alcohol and drug abuse, and out-migration patterns associated with the spill (Picou, Formichella, and Arata forthcoming). Summary findings presented below are not limited to Cordova, but incorporate data from studies previously outlined.

Among social structural impacts of the EVOS cited by Impact Assessment, Inc. (1990, 1998) were housing and lodging shortages and excessive demands for services (e.g., health care, food, transportation, childcare), resulting from sudden and dramatic increases in population size due to cleanup efforts. Cleanup activities negatively affected local businesses and government agencies as the labor force left communities to work on the oil spill cleanup or wildlife rescue (Endter-Wada et al. 1993; Impact Assessment, Inc. 1990, 1998). In a related matter, employers reported loss of staff associated with strains of excessive work (Endter-Wada et al. 1993; Impact Assessment, Inc. 1990, 1998).

In many cases, cleanup efforts also required communities to deplete financial reserves to fund these activities (Impact Assessment, Inc. 1990). In some instances this – coupled with a diminished labor force – delayed implementation of scheduled local infrastructure enhancement projects (Endter-Wada et al. 1993). Evidence presented by Endter-Wada et al. (1993) and Impact Assessment, Inc. (1990, 1998) show decreases in tax revenues resulting from closed fisheries, as well as community concerns with lack of control over cleanup efforts. Crime rates also fluctuated in impacted communities following the EVOS (Endter-Wada et al. 1993; Rodin et al. 1992). Community studies

further reveal that the PWS fishing industry and support businesses were negatively affected by the EVOS, experiencing economic losses (Endter-Wada et al. 1993; Impact Assessment, Inc. 1990, 1998) and challenges associated with public perceptions of the quality, price, and demand for PWS fish (Endter-Wada et al. 1993).

Middle-range or cultural impacts of the EVOS included uncertainty, as well as various forms of immediate social disruption including strained community relations and declines in community cohesiveness (Endter-Wada et al. 1993; Gill and Picou 1998; Impact Assessment, Inc. 1990, 1998; Picou et al. 1992). This was also manifested through high levels of collective stress (Arata et al. 2000; Gill and Picou 1998; Picou and Arata 1997; Picou et al. 1992). As discussed in the remainder of this dissertation, these types of meso-level impacts are of greatest concern in addressing issues of social capital. Findings of Impact Assessment, Inc. (1990, 1998) and Endter-Wada et al. (1993) reveal social conflict arising among different groups in the wake of the EVOS (e.g., locals versus newcomers arriving to work on the spill, drift netters versus set netters). Tension was particularly evident between those who worked on the spill cleanup and those who did not (Endter-Wada et al. 1993; Rodin et al. 1992).

People expressed uncertainty regarding short- and long-term effects of the oil spill on natural and social environments. This type of uncertainty is characteristic of responses to technological disasters (Endter-Wada et al. 1993; Fall and Utermohle 1995; Gill and Picou 1997, 1998; Impact Assessment, Inc. 1990, 1998; Picou and Gill 1995a, 1995b, 1995c, 1995d; Rodin et al. 1992). Data also reveal loss of trust among respondents in oil companies and authorities involved with oil transportation (Endter-Wada et al. 1993). Attempts by individuals to deal with psychological issues associated with loss of

environmental, economic, and social resources (Arata et al. 2000; Endter-Wada et al. 1993; Gill and Picou 1997; Impact Assessment, Inc. 1990, 1998; Picou and Gill 1997) resulted in excessive demands on community mental health organizations (Endter-Wada et al. 1993; Impact Assessment, Inc. 1990, 1998; Rodin et al. 1992).

Disruption of subsistence lifestyles among Natives and non-Natives represented additional significant short- and long-term cultural impacts for PWS residents (Dyer 1993; Dyer, Gill, and Picou 1992; Endter-Wada et al. 1993; Fall and Utermohle 1995; Gill and Picou 1997; Picou and Gill 1995a, 1995b, 1995c, 1995d; Rodin et al. 1992). The importance of exchange relationships demonstrated in subsistence activities, the symbolic significance of sharing harvested resources, spiritual ties to the environment, and occupational reliance on harvesting renewable resources should not be underestimated while examining the impacts of EVOS. Sense of place and feeling safe were diminished by the EVOS (Endter-Wada et al. 1993; Impact Assessment, Inc. 1990). Moreover, Endter-Wada et al. (1993) report cases of archaeological artifacts and/or resources being damaged or stolen.

Data regarding micro-level effects of the EVOS have been presented in a number of reports and articles since 1990. Findings reveal spill-related disruptions to daily life, family life, and increased mental stress (Arata et al. 2000; Endter-Wada et al. 1993; Gill and Picou 1998; Impact Assessment, Inc. 1990, 1998; Palinkas et al. 1992, 1993; Picou and Arata 1997; Picou and Gill 1997; and Picou et al. 1992; Rodin et al. 1992). Increased mental stress was manifested via reports of increased drug and alcohol use (Impact Assessment, Inc. 1990, 1998), chronic feelings of helplessness, betrayal and anger (Gill and Picou 1998; Picou and Gill 1997; Picou et al. 1992); increased depression, anxiety

and Post-Traumatic Stress Disorder (Arata et al. 2000; Gill and Picou 1998; Impact Assessment, Inc. 1990; Palinkas et al. 1992, 1993; Picou and Arata 1997; Picou et al. 1992); and reported adoption of avoidance coping strategies (Arata et al. 2000; Endter-Wada et al. 1993; Impact Assessment, Inc. 1990, 1998; Picou and Arata 1997; Picou and Gill 1998; Picou et al. 1992). Long-term loss spirals exacerbated these stressors for commercial fishermen (Gill and Picou 1998; Impact Assessment, Inc. 1990, 1998; Picou and Arata 1997). Effects on children (being left unattended or with strangers while parents participated in oil spill cleanup activities; fear of being left alone; declines in academic performance; and difficulties interacting with other children and adults) were also documented (Impact Assessment, Inc. 1990, 1998; Rodin et al. 1992).

#### 1.5.4 Overview of EVOS Litigation

One of the primary reasons social impact studies of the EVOS continue is to monitor chronic effects of this technological disaster. As discussed in Chapter VI of this dissertation, litigation associated with the EVOS is considered a secondary disaster. At this point, much of the reported EVOS-related stress and anxiety are a consequence of litigation processes (Marshall, Picou, and Gill 2004).

As of March 2004, 15 years after the spill, EVOS-related litigation is ongoing. Within a matter of days following the tanker's grounding March 24, 1989, attorneys from across the United States made their way to PWS. In March 1990, the Captain of the *Exxon Valdez*, Joseph Hazelwood, was convicted of negligent discharge of oil but acquitted of charges of criminal mischief, operating a vessel while intoxicated, and reckless endangerment.

In 1991, Exxon settled criminal and civil lawsuits filed by state and federal agencies for damages to natural resources as a result of breaking several environmental laws. The civil settlement, totaling \$900 million, is administered by the *Exxon Valdez* Oil Spill Trustee Council (EVOSTC). The EVOSTC was formed to oversee restoration of the injured ecosystem through use of these funds.<sup>30</sup> In addition, Exxon Corporation was fined \$150 million, the largest sum ever imposed for an environmental crime. Of the fine, \$125 million was waived in recognition of Exxon's cooperation in spill cleanup efforts and in paying some private claims. The remaining \$25 million was awarded to the North American Wetlands Conservation Fund (\$12 million) and the national Victims of Crime Fund (\$13 million). Exxon was also required to pay \$100 million as restitution for spill-related injuries to fish, wildlife, and lands of the spill region. The Federal and state governments each received \$50 million of these funds.

More than five years after the spill, the punitive damages trial began in federal court (May 2, 1994). The following September, the jury in the case awarded \$5 billion in punitive damages to plaintiffs, including 34,000 commercial fishermen (Greenpeace 2004).<sup>31</sup> Within three weeks, Exxon had filed 15 motions to overturn the jury verdicts; all 15 were later denied by Judge Holland (January 1995). During the next several years, attorneys for Exxon continued to appeal Judge Holland's decisions on a variety of bases. In June 1997, Exxon appealed the \$5 billion judgment; ultimately, the case went before the Ninth Circuit Court of Appeals in San Francisco more than a decade after the spill

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<sup>30</sup> The Council consists of three state and three federal trustees (or their designees). For more information refer to: <http://www.evostc.state.ak.us/about.html>.

<sup>31</sup> More than 1,200 plaintiffs have died since the original punitive damages award in 1994 (Holleman 2004).

(May 3, 1999). In November 2001, the Ninth Circuit Court returned the verdict to the U.S. District Court in Anchorage, finding the \$5 billion amount excessive. In December 2002, following Judge Holland's decision to reduce the punitive damage award to \$4 billion, attorneys for Exxon and the plaintiffs appealed. By the end of the summer, 2003, the Ninth Circuit once again sent the case back to Judge Holland, based on a decision by the U.S. Supreme Court in a case against State Farm Insurance.<sup>32</sup> As of the writing of this dissertation, Judge Holland's most recent decision ordered ExxonMobil to pay \$4.5 billion in punitive damages, as well as \$2.25 billion in interest (U.S. District Court, Alaska, 2004).<sup>33</sup>

## **1.6 General Methodological Approach**

Since 1989, a majority of social impact research on the EVOS has employed quantitative methods.<sup>34</sup> Reasons for this approach were twofold: (1) information gathered by Impact Assessment, Inc. (1990) was specifically designed for use by plaintiffs in EVOS litigation processes and (2) research by Picou and Gill was designed in part as a response to general criticisms that technological disaster research was too qualitative. Indeed, critiques of technological disaster studies conducted in the 1970s and 1980s contended that research designs were not rigorous enough (e.g., Stark 1978) and that social scientists did not place enough focus on chronic, long-term implications of

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<sup>32</sup> The Ninth Circuit referred to a case in which the U.S. Supreme Court ruled a \$145 million judgment against State Farm Insurance excessive.

<sup>33</sup> For a comprehensive review of EVOS litigation through 1997, see Hirsch (1997).

<sup>34</sup> Exceptions include portions of the Impact Assessment, Inc. (1990) presented in Rodin et al. (1992) and Endter-Wada et al. 1993.

technological disasters. As one example, Drabek (1994) criticizes Erikson's (1994) work because his methods do not conform to design standards that permit much assessment of either internal or external validity" (p. 508). This led Drabek (1994) to "question his conclusions, at least until they can be verified by studies that incorporate more rigorous designs" (p. 508).<sup>35</sup>

This dissertation research follows in the tradition of qualitative studies of technological disasters (e.g., Edelstein [1988] 2004; Erikson 1976a, 1994; Kroll-Smith and Couch 1990b), concurrently incorporating quantitative data collected by Gill and Picou between 1989 and 2001. Qualitative data gathered through 48 in-depth personal interviews, as well as through participant observation conducted in 2002 and 2003 examines how Cordovans view and interpret impacts of EVOS on their community's social capital. Extant quantitative data address the EVOS aftermath in Cordova focusing on measures highlighting various forms of social capital. Combined, these data examine social capital and its relationship to social impacts in the aftermath of a technological disaster such as the EVOS. Collectively, these methodologies offer a broad spectrum of insights into social and psychological impacts of technological disasters. More specifically, they address the potential of social capital theory for use in technological disaster research.<sup>36</sup>

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<sup>35</sup> Drabek's 1994 review of *A New Species of Trouble* (Erikson 1994) criticizes Erikson for not including or noting "an abundant number of studies focused on the long-term psychological effects of disaster," citing this as "a major disappointment" (p. 508).

<sup>36</sup> Although the original theoretical framework for this dissertation research focused on Edelstein's ([1988] 2004, 2000) conceptualizations of stress, "lifestyle change," and "lifescape change" in the aftermath of technological disasters, it became evident during data analysis that social capital theory offered a potential integrating framework for these and other disaster research concepts. This is further addressed in Chapter VII of this dissertation.



## 1.7 Organization of the Dissertation

This dissertation is organized into seven chapters. Following this introduction, Chapter II presents a literature review of social capital theory and social science research on natural and technological disasters, providing the theoretical framework for the remaining chapters. The review of social capital theory examines different conceptualizations of social capital, highlighting those relating to existing technological disaster theories and concepts. The review of disaster research examines various approaches to studying social and psychological impacts of disasters, beginning with the ecological-symbolic approach and concept of an RRC. Additional concepts presented in this chapter are distinctions that have been drawn between natural and technological disasters, including the issue of “recreancy,” “collective trauma,” differences between “therapeutic” and “corrosive communities,” and various stage models of natural and technological disasters.<sup>37</sup> Discussion then examines disaster-related stress reactions and coping; “lifestyle change” and “lifescape change;” issues of trust and “ontological security;” perceptions of risk; and social impacts of secondary disasters. This chapter concludes with an overview of how social capital theory provides a unifying framework integrating various elements of technological disaster research.

Chapter III presents the research design employed in this dissertation, emphasizing the interactive, mutually influential nature of different aspects of social science research. This chapter reviews the purposes, conceptual context, research questions, methods, and issues of validity associated with this study. Furthermore,

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<sup>37</sup> From this point forward, the term “technological disaster” is used interchangeably with the terms “human-made” or “human-caused” disaster.

Chapter III discusses: (1) the value of employing a mixed-method approach in research; (2) conceptual distinctions between qualitative and quantitative methodologies; and (3) social constructionism and narrative constructivism as guiding methodological philosophies. This chapter concludes with a description of research methods for this study including incorporation of quantitative data, participant-observation, and in-depth personal interviews.

Chapter IV provides contextualizing information about the community of Cordova, presenting narratives regarding the community's relationship with the natural environments of Prince William Sound and the Copper River Delta. Discussion focuses on the ecological-symbolic approach and RRC concept, demonstrating Cordovans' ties to their natural environment and suggesting how these connections influenced psychological, social, and cultural interpretive processes in the wake of the EVOS. This chapter elaborates on the notion that social capital in Cordova is "flavored" by ecological-symbolicism and the fact that the community is an RRC. Subsistence activities among Alaska Natives and non-Natives are examined with respect to social capital, reviewing aspects of anticipation and preparation, harvesting, utilization, and reflection involved in a subsistence lifestyle.

Chapter V further contextualizes qualitative findings presented in Chapters VI and VII. Understanding Cordovans' myriad perspectives of the EVOS almost 15 years after the incident requires those not living in the community in 1989 to place this technological disaster in social, cultural, historical, and economic contexts. This chapter provides narratives regarding residents' recollections of the EVOS, offering opportunities to "hear" voices of Cordovans articulate the milieu in the community following the

grounding of the *Exxon Valdez*. Accounts describe how interviewees first learned the tanker had struck Bligh Reef; their immediate concerns, reactions, and actions following the spill; the community's social atmosphere immediately after the spill; and their activities in subsequent days, weeks, and months. Narratives offer insights into social disruption in Cordova following the EVOS, breaching recreancy and the emergence of a corrosive community. This chapter concludes by addressing relationships between recreancy and social capital in the aftermath of a technological disaster.

Chapter VI focuses on the remaining four research questions, examining relationships between social capital theory and: (1) individual stress and collective trauma; (2) the emergence of a corrosive community; (3) lifestyle change and lifescape change; and (4) secondary disasters associated with technological disasters. Presentation of Cordovans' narratives in this chapter weaves these concepts together with a common thread of social capital theory – noting similarities and highlighting theoretical and conceptual discrepancies.

Chapter VII reviews the potential of social capital theory for integrating key technological disaster concepts developed through more than four decades of disaster research. This chapter summarizes research findings presented in Chapters IV and VI examining implications of findings for ongoing EVOS studies, as well as broader theoretical implications for technological and natural disaster research. Chapter VII also suggests implications of findings for social capital theory research. Concluding comments address limitations of this study, proposing directions for future technological disaster research and studies of social capital.

## CHAPTER II

### LITERATURE REVIEW AND THEORETICAL FRAMEWORK

#### **2.1 Introduction**

A review of research on disasters, disaster-related stress, and risk highlights a critical need for synthesis and integration of several key concepts to advance theoretical development in the study of technological disasters. Independently, each body of literature advances our understanding of various aspects of natural and technological disasters. What they do not provide, however, is an integrated approach to studying social and psychological impacts of disasters. A framework incorporating key approaches and concepts from existing disaster, stress, and risk research literature would represent a significant contribution to the field. This dissertation demonstrates the capacity of social capital theory to integrate important conceptual elements of technological disaster research that have emerged in the past 40 years.

This chapter begins with a review of social capital theory, presenting different forms, sources, and manifestations of social capital, as well as relationships between social capital and social structure. The ecological-symbolic perspective and concept of a renewable resource community (RRC) are then introduced as contextualizing approaches to address social and psychological impacts of disasters. This is followed by a review of conceptual distinctions that have been drawn between natural and technological or

human-made disasters including the notion of “recreancy,” “collective trauma,” differences between “therapeutic” and “corrosive” communities, and various stages associated with natural and technological disasters.<sup>1</sup> Further discussion considers: (1) stress reactions and coping; (2) “lifestyle change” and “lifescape change” in the aftermath of disasters; (3) issues of trust and “ontological security;” (4) perceptions of risk; and (5) the emergence of secondary disasters and their effects on communities. This chapter then presents research questions for this study and discusses social capital and other concepts and theories relating to technological disasters. The chapter concludes with a discussion of how social capital can be used as a unifying framework to advance theory in disaster research, particularly as it pertains to technological disasters, as well as possibilities for advancing application of social capital theory in future disaster research.

## **2.2 Social Capital**

Explicit and implicit in extant technological disaster research is social capital, which broadly refers to “social networks, the reciprocities that arise from them, and the value of these for achieving mutual goals” (Schuller, Baron, and Field 2000:1). The literature reveals seven arenas in which social capital theory has been applied: social theory and economic development; families and youth behavior problems; schooling and education; community life; work and organizations; democracy and governance; and general cases of problems of collective action (Woolcock 1998:193-6; also see Kawachi et al. 1997; Nauck 2000; Portes 1987; Wilkinson 1996). Based on a review of both social

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<sup>1</sup> From this point forward, the term “technological disaster” is used interchangeably with the terms “human-made” or “human-caused” disaster.

capital and disaster-related literature, it appears no published studies to date have addressed technological or natural disasters using social capital theory. However, as discussed below, social capital theory offers considerable potential as a unifying framework to examine social and psychological impacts of technological disasters. Similarly, applying social capital theory in disaster research may further illuminate potential for using social capital in community studies.

### 2.2.1 Defining Social Capital

According to Putnam (2000), the earliest use of the term social capital was by Hanifan who included “good will, fellowship, sympathy, and social intercourse among the individuals and families who make up a social unit” in his conceptualization (p. 19). Hanifan (1916) suggested an absence or presence of these elements in relationships affects individuals and communities where they live. Others (e.g., Paxton 1999) cite Jacobs (1961) and Loury (1977) as having employed the term prior to introduction into popular use by Bourdieu (1984) and Coleman (1988).<sup>2</sup>

Generally, the presence of social capital facilitates actions of individuals and organizations within social structures. Putnam (2000) defines social capital as “connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them” (p. 19). According to Bourdieu (1983),

Social capital is the aggregate of the actual or potential resources which are linked to possession on a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or

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<sup>2</sup> Articulations of social capital since the 1950s mirror Hanifan’s (1916) description; notably, however, these were independently developed without knowledge of his work (Putnam 2000).

in other words, to membership in a group – which provides each of its members with the backing of the collectively-owned capital, a ‘credential’ which entitles them to credit. (Pp. 248-9)

Paxton (1999) contends social capital has quantitative and qualitative dimensions, respectively consisting of “objective” associations between individuals as well as “subjective” ties between them. Objective associations necessitate shared social space and a network structure linking individuals through organizations or institutions. Subjective ties are those that are positive, trusting, and reciprocal, though, as will be discussed later, effects and uses of social capital are not always positive (Paxton 1999). Paxton (1999) further suggests distinguishing between “active” and “latent” social capital. Active social capital facilitates attainment of individual and group goals; latent social capital represents potential individual and group energy.

Finally, it is important to understand Coleman’s (1988) perspective:

[M]ost types of social capital are created or destroyed as *byproducts of other activities*. This social capital arises or disappears without anyone’s willing it into or out of being and is thus even less recognized and taken account of in social action than its already intangible character would warrant. (P. S118, italics added)

It may be argued that Coleman’s is a rather deterministic position. Learning more about generation of social capital as a byproduct of other activities may offer opportunities to encourage and facilitate circumstances for its creation – particularly in the aftermath of a technological disaster when communities are experiencing upheaval.

In contrast to financial capital, physical capital (e.g., technology), and human capital (e.g., education), “social capital is defined by its function” (Coleman 1988:S98). As Coleman (1988) proposes:

Unlike other forms of capital, social capital inheres in the structure of relations between actors and among actors. It is not lodged either in the actors themselves or in physical implements of production. . . . If physical capital is wholly tangible, being embodied in observable material form, and human capital is less tangible, being embodied in the skills and knowledge acquired by an individual, social capital is less tangible yet, for it exists in the *relations* among persons. (Pp. S98, 100-101, italics in the original)

As shown in Table 2.1, studies of human capital focus on individuals, using measures of duration and qualifications to examine income, productivity, health, and civic activity outcomes. Social capital researchers explore relationships and networks by measuring levels of trust, organizational membership, and societal participation. Outcomes of social capital include social cohesion, social solidarity, additional social capital, and economic achievement. Social capital tends to be interactive or circular, with more diffuse, less easily definable returns; human capital is more linear – “investment is made, in time or money, and economic returns follow in direct, if variable, proportion to the amount invested” (Field, Schuller, and Baron 2000:251). Because rates of return are more easily measured with respect to investment in human capital resources, policy implications are also more direct. For example, skills training investments are typically justified by projected increases in earnings and profitability. When social capital is measured, benefits primarily emerge at a group or institutional level, rather than an individual level. Field, Schuller, and Baron (2000) claim “social capital is less clearly and directly associated with a tangible and measurable return; indeed the returns on social capital may not be measurable at all” (p. 252). Bourdieu (1986) notes, “The profits which accrue from membership in a group are the basis of the solidarity which makes them possible” (p. 249). Interaction between individuals helps develop trust and encourages



further association, which manifests itself at a group or organizational level through solidarity. Nothing would occur at a macro level without micro level relationships.

Table 2.1 – The Relationship Between Human Capital and Social Capital\*

	<u>Human Capital</u>	<u>Social Capital</u>
Focus	Individual	Relationships
Measures	Duration Qualifications	Membership/participation Trust levels
Outcomes	Direct: income; productivity Indirect: health; civic activity	Social cohesion/solidarity Membership/participation Economic achievement More social capital
Model	Linear	Interactive/circular
Policy	Skilling, accessibility & rates of return	Citizenship, capacity-building & empowerment

\*Adapted from Field, Schuller, and Baron (2000, Table 14.1:250).

### 2.2.2 Trust and Association as Primary Components of Social Capital

Distinctions between components or forms of social capital and social-structural mechanisms or circumstances that generate, enhance, or maintain social capital are sometimes difficult to discern in social capital literature. Paxton's (1999) discussion is helpful in this respect. According to her, social capital consists of two primary

components: trust and associations. First, without at least a minimum level of *trust*, it would be impossible for individuals and societies to function. Trust may be defined as

socially learned and socially confirmed expectations that people have of each other, of the organizations and institutions in which they live, and of the natural and moral social orders, that set the fundamental understandings of their lives. (Barber 1983:165)

This definition captures distinctions between micro-level trust among individuals or small groups and macro-level trust within communities and society.

The second major component of social capital is *associations*, which facilitate communication, diffusion of information, and social support. Associations are “objective ties,” which include “informal” and “formal” relationships or networks between individuals (Paxton 1999). There are many types of informal relationships. Among these are friendships, exchange relationships, proximity in space (e.g., office mates), and kinship relations. Formal relationships involve participation or membership in organizations. Paxton (1999) distinguishes between informal and formal associations as follows: “Informal friendship networks are defined *by* the ties between individuals, but formal associations survive beyond any particular member or internal social network” (p. 100, italics in the original).

Paxton (1999) indicates there is a difference between trust in specific individuals and “abstract” trust in people, institutions, or systems. MacGillivray and Walker (2000) refer to these forms of trust as “informal social capital” and “formal social capital,” respectively (See Table 2.2). Informal social capital is represented by trust *between* individuals; formal social capital consists of trust *in* organizations and social systems. Components of informal social capital are networks and connections, levels of trust,

norms, and reciprocity. Components of formal social capital are number of organizations, services provided, effectiveness, community involvement, networks, and partnerships (MacGillivray and Walker 2000). According to social capital research, resolution of collective problems and goal attainment in communities and society at large is accomplished by utilizing resources generated through formal group membership (e.g., see Lipset, Trow, and Coleman 1956).

Table 2.2 – Components of Informal and Formal Social Capital\*

	<u>Informal Social Capital</u>	<u>Formal Social Capital</u>
Type of Trust	Trust in each other	Trust in organizations
Components	Level of trust Norms Reciprocity Networks & connections	Number of organizations Services provided Effectiveness Community involvement Networks & partnerships

\*MacGillivray and Walker (2000, Table 11.1:202).

“While trust in specific others may be important at more microlevels of social capital, generalized trust is the important feature of national-level social capital” (Paxton 1999:99). It may be argued that this is true at a community level, as well. As Paxton (1999) notes, this is reminiscent of Giddens’ (1990) discussion of trust in expert systems. Moreover, the notion of generalized trust reflects the concepts of “ontological security” and “lifescape,” discussed later in this chapter.

Norms of “specific reciprocity” and “generalized reciprocity,” which are embedded in the concept of trust, sustain social connections. Specific reciprocity involves an arrangement in which an individual or group agrees to do something for another individual or group in return for something predetermined. Generalized reciprocity is based on a high level of trust existing in environments where frequent social interaction has laid a foundation for mutual obligation and responsibility for action. Frequent communication and contact with others through association develops reputations of individuals and groups; this is essential for building and maintaining trust in a complex society. Putnam (2000) asserts generalized reciprocity is more valuable than specific reciprocity: “I’ll do this for you without expecting anything specific back from you, in the confident expectation that someone else will do something for me down the road” (p. 21). In this sense, social capital is like the Golden Rule – do unto others as you would have done unto you.

Both specific and generalized reciprocity contain elements of expectation, obligation, and trust at micro or macro levels, respectively (Coleman 1988). As Coleman (1988) states, “If *A* does something for *B* and *trusts B* to reciprocate in the future, this establishes an *expectation* in *A* and an *obligation* on the part of *B*” (p. S102, italics added). In social environments where social capital is considered to be high, there is trust that expectations and obligations will be met (Coleman 1988). Moreover, such settings reproduce social capital through ongoing reaffirmation of relationships.

### 2.2.3 Positive Manifestations of Social Capital

A review of social capital literature reveals there are positive and negative aspects of how social capital emerges and how it is used at micro and macro levels in society. The next two sections highlight and provide examples of these different manifestations of social capital. First, where social connections are trusting and positive, networks have value as social capital in that they influence productivity of individuals and groups (Coleman 1988, 1990; Paxton 1999; Putnam 2000). Social capital may foster individual, private-level good, such as the example Paxton (1999) uses of a mother asking a friend to care for her child rather than hiring a babysitter. In this case, the mother's social tie primarily benefits her, though it does produce an obligation on her part, thus increasing the social capital between her and the friend. This represents social capital at a micro level. Social capital may also generate good at a community level, between many groups; in this sense, social capital is a macrosociological phenomenon (Paxton 1999; also see Fukuyama 1995; Putnam 1995, 2000).

According to Putnam (2000), social capital may at once be positive for individuals, as well as for the broader community. Putnam's (2000) work demonstrates "a well-connected individual in a poorly connected society is not as productive as a well-connected individual in a well-connected community" (p. 20). Moreover, even a poorly connected individual may reap benefits of living in a well-connected community. It follows that diminished social capital also has potential to decrease productivity of individuals and groups.

Second, social norms and effective sanctions represent “powerful, though sometimes fragile, form[s] of social capital” (Coleman 1988:S104). Norms that “one should forgo self-interest and act in the interests of the collectivity” are referred to as “prescriptive” norms (Coleman 1988:S104). Prescriptive norms are reinforced by internal and external sanctions and rewards, including social support, status, and honor (Coleman 1988).

Third, Coleman (1988) and Putnam (2000) contend that networks of social capital facilitate a flow of information; this, in turn, assists in individual and community goal attainment. Information provides a basis for action (Coleman 1988). Thus, social capital provides a means whereby collective problems may be resolved. Lack of social capital (i.e., trust, norms, associations, and networks) impedes flow of information in communities and, ultimately, hinders a community’s capacity to resist threats or collectively take advantage of opportunities (Putnam 2000). When social capital is diminished, a community’s ability to reach goals and address problems is also hindered.

Fourth, social capital “greases the wheels that allow communities to advance smoothly” (Putnam 2000:288). That is, social and business transactions are more efficient (i.e., less costly) when repeated interactions with others have generated trust in a community. Coleman (1988) concurs, noting organizations with considerable trust and trustworthiness are more effective and efficient than those lacking these qualities.

Fifth, social capital is beneficial because it “widen[s] our awareness of the many ways in which our fates are linked” (Putnam 2000:288). Similarly, Paxton (1999) comments that individual participation in associations leads to “enlightened self-interest,”

generating a shared sense of responsibility and common identity. Conversely, “when people lack connections to others, they are unable to test the veracity of their own views, whether in the give-and-take of casual conversation or in more formal deliberation” (Putnam 2000:288-9). Connections to others tend to generate moderation, as well as tolerance toward and empathy for others (Paxton 1999; Putnam 2000).

Finally, “mounting evidence suggests people whose lives are rich in social capital cope better with traumas and fight illness more effectively” than those with less social capital (Putnam 2000:289). Examining social capital as it relates to health, Campbell (2000) refers to the work of Baum (1999), Gillies (1998), Kawachi et al. (1997), Lomas (1998), and Wilkinson (1996) who suggest social capital might be associated with positive health outcomes. Bandura (1996) found that individuals are more likely to take control of health related issues if they perceive they are in control of other areas of their lives. Moreover, social support, empowerment, and perceived self-efficacy have been documented as important factors in health outcomes (Campbell 2000). Social capital research in the health arena, as in other realms is still in its infancy. “Much work remains to be done developing measurement tools to facilitate the quest for such hard empirical evidence” (Campbell 2000:195). Specifically, Campbell (2000) maintains there is a need to study existing quantitative data in conjunction with what she calls “micro-qualitative ‘bottom up’ studies of the forms social capital takes in particular local communities” (p. 195).<sup>3</sup>

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<sup>3</sup> For an example of a “micro-qualitative” study see Campbell and Mzaidume (1999).

#### 2.2.4 Negative Manifestations of Social Capital

The aforementioned benefits of social capital should not preclude an understanding of constraints associated with its various forms. For example, “networks and the associated norms of reciprocity are generally good for those inside the network, but the external effects of social capital are by no means always positive” (Putnam 2000:21). Putnam (1993, 2000) and others (e.g., Briggs 1997; Coleman 1988; Paxton 1999; Schuller, Baron, and Field 2000) encourage recognition that positive aspects of social capital such as mutual support, cooperation, trust, and institutional effectiveness may not always be realized and instead, negative manifestations may emerge, such as ethnocentrism and corruption. These notions are captured with the concepts of “bridging” social capital and “bonding” social capital. The former is inclusive – such as the civil rights movement – seeking to involve individuals across diverse social groups. Bonding social capital is inward looking, fostering exclusive identities and homogeneous groups, such as “good old boy” networks, ethnic fraternities or sororities, the Mafia, or the Ku Klux Klan (e.g., see Paxton 1999; Putnam 2000; Schuller, Baron, and Field 2000). Bonding social capital employs specific reciprocity; bridging social capital nurtures generalized reciprocity. As Putnam (2000) states:

Bonding social capital constitutes a kind of sociological superglue, whereas bridging social capital provides a sociological WD-40. Bonding social capital, by creating strong in-group loyalty, may also create strong out-group antagonism. . . . Nevertheless, under many circumstances both bridging and bonding social capital can have powerfully positive social effects. (P. 23)

In summary, Coleman (1988) contends, “a given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others” (p. S98).



Finally, norms and sanctions associated with social capital may constrain as well as facilitate individual and group actions. Coleman (1988) offers an example of a community norm guiding a gifted male athlete to play football; in effect this norm diverts energies of this young man from other potential activities that may have more benefit to the community. In other words, norms enhancing group cohesion may also hinder innovations that may advance a group as a whole (also see Merton 1968).

#### 2.2.5 Social Capital and Social Structure

Trust, information, norms, expectations, reciprocity, and authority relations are all forms of social capital, each of which contributes to social structure and the productivity of groups (Coleman 1988). Social capital is not the exclusive property of members of a society, nor is it easily exchanged. Instead, social capital is an attribute of the particular social structure in which actors are operating (Coleman 1990). Frank and Yasumoto (1998) purport individuals pursue social capital “through different *mechanisms* according to the social structure in which any given action is embedded” (p. 643, italics in the original). That is, because social capital is defined with respect to resources pursued through social ties, it is social ties and the historical context of these ties that influence individual actions. Thus, social structure influences actions of individual actors, according to expectations and obligations. Furthermore, the converse is also true – that expectations and obligations influence the nature of social structure. Importantly, “*the coherence of systems [i.e., social structure] is sustained by the flow of resources and favors facilitated by social capital*” (Frank and Yasumoto 1998:645, italics added).

“Reciprocity transactions” and “enforceable trust” are two mechanisms through which individuals pursue social capital (Portes and Sensenbrenner 1993). The uses of these mechanisms are determined by the type of social structure. Granovetter’s (1973, 1983) network theory asserts “our acquaintances (*weak ties*) are less likely to be socially involved with one another than our close friends (*strong ties*)” (p. 201, italics in the original). He further distinguishes between low-density social networks and (with relatively few links between individuals) and densely knit social networks of close friends (with numerous ties between individuals). With respect to social capital, where social ties are dense, norms of reciprocity are sustained by expectations and feelings of obligation. On the other hand, enforceable trust imposes constraints on individuals, which is best suited to subgroups. Frank and Yasumoto (1998) offer cases where their theory of reciprocity and enforceable trust will not apply:

In particular, actors may not be able to enforce the trust of subgroup members when there is little effect of sanctions imposed for the violation of subgroup solidarity. This may occur when underlying social ties are unstable or sparse.... In these cases, the internal social structure of the system is relatively undifferentiated. The actors may still accumulate social capital independently through reciprocity transactions but not through allegiance to a web of ties such as those within a cohesive subgroup.

*When a system becomes factionalized ... support for a member of another group may be taken, by definition, as hostile to one’s own subgroup.... In these cases, the system degenerates into a set of nonintegrated subsystems, each defining a faction. (P. 676, italics added)*

This notion will be revisited during discussion of the “corrosive community” later in this chapter.

### 2.2.6 Summary of Social Capital Theory

Schuller, Baron, and Field (2000) contend social capital has considerable promise, despite what they refer to as its “adolescent characteristics” (p. 35). According to them, the approach “is neither tidy nor mature; it can be abused, analytically and politically; [and] its future is unpredictable” (Schuller, Baron, and Field 2000:35). Nonetheless, general merits of social capital theory include: (1) a shift in focus from the behavior of individual agents to patterns of relations between individuals, social units, and institutions; (2) the potential for social capital to make connections between different levels of analysis; (3) the potential for social capital theory to bridge social science disciplines; (4) a “reinsertion” of values into social scientific discourse by employing terms such as “trust,” “sharing,” and “community;” and (5) the value of social capital as a heuristic tool (Schuller, Baron, and Field 2000:35-7; also see Coleman 1988; Frank and Yasumoto 1998). These merits make social capital worth exploring as an integrating theory for disaster research in general and research in technological disasters in particular.

Although to date social capital theory has not been employed in studies of technological disasters, theoretical approaches used in studying communities affected by such events implicitly or explicitly incorporate many aspects of social capital theory (e.g., Arata et al. 2000; Edelstein ([1988] 2004; Erikson 1976a, 1976b, 1994; Gill and Picou 2001; Gleser et al. 1981; Picou and Gill 1997; Picou et al. 1992). Particularly, Freudenburg’s (1993, 2000) concept of recreancy, Freudenburg and Jones’ (1991) conceptualization of the corrosive community, Gill and Picou’s work on renewable

resource communities (Gill 1994; Gill and Picou 2001; Picou and Gill 1997; Picou et al. 1992), Hobfoll's (1988, 1989, 1991) conservation of resources model of understanding stress, Edelstein's ([1988] 2004, 2000) commentary on stress, lifestyle change, and lifescape change in the wake of technological disasters, and Giddens' (1990, 1991) discussion of ontological security each allude to social capital. Indeed, a number of quantitative measures from these studies are similar or identical to those used in social capital research (e.g., see Arata et al. 2000; Gill 2002 and Picou 2001; Gleser et al. 1981; McGillivray and Walker 2000; Picou and Gill 1995a, 1995b, 1995c, 1995d, 1997; Picou et al. 1992; Putnam 2000). Findings and conceptual developments from this body of research, however, do not explicitly mention social capital. Moreover, studies of social capital have not broached disaster research, an approach with considerable promise for advancing social capital theory. Though currently not addressed with respect to social capital, empirical research suggests communities impacted by technological disasters – especially subsistence communities – experience loss of social capital in various forms including trust and association.

## **2.3 Ecological-Symbolic Approach and Concept of a Renewable Resource Community**

### **2.3.1 Ecological-Symbolic Approach**

The “ecological-symbolic” approach and concept of a “renewable resource community” contextualize the subsequent comparison of natural and technological

disasters. Kroll-Smith and Couch's (1991a, 1991b, 1993a, 1993b) ecological-symbolic perspective lends an understanding of how communities interpret biospheric contamination resulting from technological disasters. An ecological-symbolic approach to studying disasters postulates that interpretive processes mediate how humans experience environmental trauma and these processes are influenced by the type of environment that is damaged (Kroll-Smith and Couch 1991a, 1991b, 1993a, 1993b). "[C]ommunities exist in exchange relationships with their built, modified, and biophysical environments. From this perspective, theories of disaster are always about the disruptions between people and habitats" (Kroll-Smith and Couch 1993a:50).

Human perceptions of disasters produce social and systemic changes through collective adaptive responses (Kroll-Smith and Couch 1993a). From an ecological-symbolic perspective, Kroll-Smith and Couch (1993b) posit that trauma resulting from technological disasters creates collective stress. They suggest there are two sources of threat: (1) cultural change, which involves "reality disjuncture" (i.e., no shared group assumptions) and (2) structural change, which disrupts a community's routines and social networks. These are similar to Edelstein's ([1988] 2004, 2000) "lifescape change" and "lifestyle change," respectively, which will be discussed in greater detail later in this chapter. These sources of stress generate additional stressors because of accompanying uncertainty, loss of control, alienation, and issues surrounding threat belief systems. Elevated levels of uncertainty require victims to construct their own versions of reality. Thus, trauma and stress associated with technological hazards cannot be ameliorated only with technical support or medical assistance. Human perceptions and adaptation to

collective stress require in kind support to create shared meaning and promote cooperation and recovery (Kroll-Smith and Couch 1993b).

### 2.3.2 Concept of a Renewable Resource Community

The concept of a renewable resource community represents a theoretical extension of the ecological-symbolic approach, offering a sociologically based approach for explaining chronic psychological stress associated with technological disasters (Gill 1994; Gill and Picou 1997, 2001; Picou 2000; Picou and Gill 1997). First applied to communities studied in the aftermath of the *Exxon Valdez* oil spill (EVOS), the RRC model ties culturally based community activities to seasonal cycles in the ecosystem (Dyer, Gill, and Picou 1992; Gill 1994; Gill and Picou 1997, 1998, 2001; Picou and Gill 1997; Picou et al. 1992). As defined by Picou and Gill (1997), “An RRC is a population of individuals who live within a bounded area and whose primary cultural, social, and economic existences are based on the harvest and use of *renewable* natural resources” (p. 881, italics added; also see Gill 1994; Gill and Picou 1997, 2001; Picou et al. 1992). The RRC concept is a refinement of the natural resource community (NRC) model, which demonstrates community dependence on natural resources (Dyer, Gill, and Picou 1992).<sup>4</sup>

Although every community is reliant upon its biophysical environment, the extent to which RRCs are dependent upon biophysical resources goes well beyond that found in an urban area, for example. For instance, the destruction of a built environment that can be replaced (e.g., homes, commercial buildings, roadways, or bridges) generates very

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<sup>4</sup> Since 1992, a distinction between NRCs and RRCs has emerged based on the notion of renewable resources (Dyer et al. 1992; Picou et al. 1992). For example, a community may be dependent on non-renewable natural resources such as oil; this would be an NRC, rather than an RRC.

different interpretive processes than extensive damage to a natural environment. This is especially the case in renewable resource communities that are dependent on their natural environment. This is not to say urban communities are not affected by technological disasters, however. One consequence of biospheric contamination, such as that which occurred in Love Canal, New York, (a non-RRC) may be the realization of how important the natural system is to the human system. This consideration gives rise to different factors in risk assessment in non-RRCs.

The cultural, economic, and social structure of RRCs call for sociologists studying disaster related stress in these types of communities to consider the importance of exchange relationships demonstrated in subsistence activities, the symbolic significance of sharing harvested resources, spiritual ties to the environment, and occupational reliance on harvesting renewable resources (Gill 1994; Gill and Picou 1997, 2001; Picou 2000; Picou and Gill 1997). Because community equilibrium in an RRC is dependent on maintaining exchange relationships with the biophysical environment, when collective interpretation of these relationships no longer exists – as in the aftermath of the EVOS – social and cultural equilibrium may be disrupted, generating collective stress (Gill and Picou 1997, 2001; Picou 2000; Picou and Gill 1997).

#### **2.4 Disasters: Natural vs. Technological**

Over the past four decades, empirical findings have demonstrated the importance and validity of distinguishing between natural and technological disasters. Concurrently, definitions of disaster have broadened to incorporate technological disasters that have

occurred and in anticipation of those that will occur. It may be argued that the development of these concepts has been a social constructionist project, involving myriad stakeholders defining and redefining their realities as new situations are presented. Considering this, it is critical that social scientists regularly and frequently revisit distinctions between natural and technological disasters so these distinctions do not become reified. The following sections provide an overview of developments in disaster research according to etiology, physical damage characteristics, disaster phases, community impacts, human impacts, and event interpretation (See Table 2.3).

#### 2.4.1 Defining Disaster

The term “disaster” has many synonyms in popular American culture, including catastrophe, emergency, calamity, tragedy, and cataclysm. What defines each of these words is not simply what is found in a dictionary or thesaurus, but the meanings people and societies attribute to them. What makes an event a disaster is not just physical effects associated with it, such as environmental damage or destruction of a built environment, but people’s awareness of and reactions to it. For example, if an earthquake occurs in a remote part of the world, where no one lives, is it a disaster? An earthquake would certainly be considered a disaster if it took place in a densely populated metropolitan area such as San Francisco, California.



Table 2.3 – A Comparison of Natural and Technological Disasters\*

General Characteristics	Natural Disasters	Technological Disasters
Etiology	<ul style="list-style-type: none"> <li>▪ Rooted in nature; considered acts of God</li> <li>▪ Often predictable</li> <li>▪ Not preventable</li> <li>▪ Associated with perceived <i>lack of control</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ Caused by humans</li> <li>▪ Occur as a result of technological malfunctions, human error, or “recreancy”</li> <li>▪ Not usually predicted but perceived to be preventable; identifiable parties to hold accountable</li> <li>▪ Associated with perceived <i>loss of control</i></li> <li>▪ Widespread sources</li> </ul>
Physical Damage Characteristics	<ul style="list-style-type: none"> <li>▪ Visible damage to the built environment (e.g., buildings, roads, bridges)</li> <li>▪ Not usually class biased</li> </ul>	<ul style="list-style-type: none"> <li>▪ Damage may or may not be visible to the naked eye</li> <li>▪ Uncertainty of extent &amp; nature of the damage; “ambiguity of harm”</li> <li>▪ Biospheric contamination severs the relationship between the environment &amp; community; toxic exposure</li> <li>▪ Often disproportionately affect working or lower-class groups</li> </ul>
Disaster Phases	<ol style="list-style-type: none"> <li>1. Warning</li> <li>2. Threat</li> <li>3. Impact</li> <li>4. Inventory</li> <li>5. Rescue</li> <li>6. Remedy</li> <li>7. Recovery</li> <li>8. Rehabilitation</li> </ol>	<ul style="list-style-type: none"> <li>▪ Do not follow the linear stage model identified for natural disasters</li> <li>▪ Difficult to pinpoint a beginning &amp; an end; lack of finality/closure</li> <li>▪ Communities tend to remain in warning, threat &amp; impact stages</li> <li>▪ “Secondary disasters” ensue (e.g., litigation, relocation)</li> </ul>
Community Impacts	<ul style="list-style-type: none"> <li>▪ “Therapeutic” or “altruistic” community emerges; communities experience “post-disaster utopia” &amp; “amplified rebound”</li> <li>▪ Collective definition of the situation; “community of sufferers”</li> <li>▪ “Lifestyle change”</li> <li>▪ Outsiders offer assistance</li> </ul>	<ul style="list-style-type: none"> <li>▪ “Collective stress” results in the emergence of a “corrosive community”</li> <li>▪ Community stigmatized; “outsiders just don’t understand”</li> <li>▪ No collective definition of the situation; individuals forced to create their own</li> <li>▪ Role ambiguity</li> <li>▪ “Lifestyle change” &amp; “lifescape change”</li> <li>▪ Grassroots level responses</li> </ul>
Human Impacts	<ul style="list-style-type: none"> <li>▪ Short-term psychological &amp; sociological stress</li> </ul>	<ul style="list-style-type: none"> <li>▪ Long-term, chronic psychological &amp; sociological stress</li> <li>▪ Long-term negative health outcomes</li> </ul>
Event Interpretation	<ul style="list-style-type: none"> <li>▪ Minimal use in conceptualizing natural disasters as social problems, since they are not seen as preventable &amp; do not generate social movements</li> </ul>	<ul style="list-style-type: none"> <li>▪ May be considered a social problem, based on a natural history model</li> <li>▪ Product of the dominant social paradigm &amp; complexity of technological infrastructure</li> <li>▪ Challenges “ontological security”</li> <li>▪ Influences perceptions of risk</li> </ul>

\*See Ahearn and Cohen (1984); Barton (1969); Baum and Fleming (1993); Baum, Fleming, and Singer (1983); Brown and Mikkelsen ([1990] 1997); Clarke and Short (1993); Couch and Kroll-Smith (1985); Cuthbertson and Nigg (1987); Drabek (1986); Dynes (1970, 1974); Edelstein ([1988] 2004, 2000); Erikson (1976a, 1976b, 1994); Freedy et al. (1994); Freudenburg (1993, 2000); Freudenburg and Jones (1991); Fritz (1961); Gill and Picou (1991 & 1998); Green (1996); Kreps and Drabek (1996); Kroll-Smith and Couch (1990a, 1993b); Levine (1982); Palinkas et al. (1992, 1993a, 1993b); Perrow (1984); Picou and Gill (1997); Picou, Gill, and Cohen (1997); Picou et al. 2001; Picou, Formichella, and Arata (forthcoming); Smith and North (1993); Vyner (1988); Wolfenstein (1957).

Because there are different social constructs of disaster, there is no widespread consensus on the meaning of the term (Green 1996; Quarantelli 1998). One of the factors contributing to confusion surrounding definitions of disaster is that disaster researchers represent a wide variety of disciplines including sociology, psychology, political science, engineering, geology, and geography. These disciplines bring diverse perspectives to bear on disaster research. Prior to the 1960s, disasters were defined primarily with respect to physical agents (e.g., tornadoes, floods, hurricanes, or earthquakes), physical impacts of these agents, and assessment of these impacts (Quarantelli 1981). Over the years, a dichotomy has developed distinguishing between physically oriented descriptions of disaster and socially driven conceptualizations. Fritz's (1961) definition is attributed as a turning point in conceptualization of disasters:

[An event] . . . concentrated in time and space, in which a society or a relatively self-sufficient subdivision of society, undergoes severe danger and incurs losses to its members and physical appurtenances that the social structure is disrupted and the fulfillment of all or some of the essential functions of the society is prevented. (P. 655)

Almost a decade later, Barton's (1969) discussion of collective stress offers a distinctly social characterization of disaster: "[C]ollective stress occurs when *many members of a social system fail to receive expected conditions of life from the system*" (p. 38, italics in the original). This conceptualization incorporates social disruption that ensues following the physical impact of an event, perceptions of crisis situations whether or not they involve physical impacts, political definitions of situations, and an imbalance in the ability of a social system to meet the demands of a crisis situation (Quarantelli 1981). From a sociological viewpoint, disasters are only disasters with respect to their

social causes and effects and, thus, disasters cannot be understood apart from their social context (Dynes 1970; Quarantelli 1992; Quarantelli and Dynes 1978). Kreps (1989) maintains disasters are

. . . nonroutine events in societies or their subsystems . . . that involve conjunctions of historical conditions and social definitions of physical harm and social disruption. Among the defining properties of such events are length of forewarning, magnitude of impact, scope of impact, and duration of impact. (P. 219)

Stallings (1991) contends natural disasters cannot be considered social problems because there is no claims-making process associated with them. Conversely, Kreps and Drabek (1996) argue disasters of any sort constitute social problems because the processes of assigning value or meaning to disasters are applicable not only to technological disasters, but natural disasters, as well. Adopting a conflict perspective (and, in effect, a social constructionist perspective), Clausen et al. (1978) contend disasters depend on the values of who is defining the event. Peacock and Ragsdale (1997) assume this position in their examination of the systemic nature of disaster impacts from a socio-political ecology perspective. Fundamentally, disasters are social phenomena that have social impacts (See Figure 2.1).

- Revelation of existing social-structural weaknesses as the system is placed under stress
- Systemic stress results in adaptation that may or may not become permanent
- Emergence of new groups and organizations, resulting in new forums for cooperation and conflict
- Immediate influx of human and material resources from outside a community
- Emergence of differential effects on existing social arrangements, including socioeconomic and ethnic groups
- Changes in physical infrastructure resulting in alterations of the division of labor
- Conflict over scarce resources

\*Adapted from Morrow and Peacock (1997).

Figure 2.1 – Social Impacts of Disasters\*

#### 2.4.2 Conceptual Distinctions Between Natural and Technological Disasters: Etiology and Physical Damage Characteristics

Disasters are common occurrences (Green 1996; Green and Lindy 1994). Worldwide, between 1993 and 2002, more than 623,000 people died in 5,402 natural and technological disasters (Walter 2003). Of these, nearly 93,000 deaths were attributed to 2,467 technological disasters (Walter 2003). More than 2.4 billion people were reported as “affected” by disasters during the same period (Walter 2003).

Increasingly, definitions of disaster are allowing for different origins of events, including nature and technology (Green 1996). For example, Norris (1992) characterizes disasters as events involving “violent encounters with nature, technology, or humankind” (p. 409). Looking only at etiology of disasters, however, it can be difficult to discern differences between two events. Because each disaster is unique with respect to extent of physical damage, exposure of populations to life threatening circumstances, and recovery

environment (e.g., size of community, location of community, relationship of community to its natural environment), it can be difficult to compare severity, types, and long-term impacts of disasters (Green 1996). Consequently, disaster inquiry has shifted from a focus on origins of disaster events (i.e., natural or technological) to one of discerning social and psychological outcomes of disasters.

Although both natural and technological disasters result in unplanned and unfavorable changes in the environment, natural disasters are attributed to nature (e.g., earthquakes, monsoons, floods, tidal waves, tornadoes, or hurricanes) and are generally considered “acts of God.” Importantly, this conceptualization of natural disasters does not include, for example, flooding of a community caused by intentional regulation of water levels with dams. Although this type of disaster results in the same physical damage as a “natural” flood it may be considered a technological disaster because it stems from human decisions or choices (e.g., see Blocker and Sherkat 1992; Green 1996). Moreover, traditional conceptualizations of natural disasters do not incorporate consequences of naturally occurring events that result from human negligence or error. Examples of this include the collapse of a building during an earthquake or hurricane as a result of failure to construct buildings according to code, deaths from tidal waves or tornadoes resulting from poorly planned evacuation routes or warning systems, or an airplane crash precipitated by weather conditions (e.g., see Green 1996).

Unlike natural disasters, technological disasters are induced directly or indirectly as a result of technological malfunctions or human error (Perrow 1984). Providing a clear

and concise distinction between natural and technological disasters, Freudenburg (1997)

states:

The simplest rule of thumb for categorizing disasters as natural or technological . . . has to do with the triggering event: *if the triggering event could have taken place even if no humans were present . . .* then the disaster is most appropriately seen as a 'natural' one. By contrast, if the triggering event was one that inherently required human action . . . then the disaster is most appropriately seen as technological. (Pp. 24-5)

Further distinguishing between natural and technological disasters Green (1982, 1993, 1996) suggests conceptualizing trauma along a “continuum of deliberateness” where technological disasters fall mid-way between natural disasters and purposeful acts of violence (See Figure 2.2a). Figure 2.2b presents a revised version of Green’s model incorporating litigation and terrorism as “events.”

Considering Figure 2.2b in conjunction with Erikson’s (1994) scheme for classifying disasters (Table 2.4) provides additional insights in efforts to understand distinctions between natural and technological disasters. Although there have been no known cases in which technological disasters were deliberate (otherwise they would likely have been deemed acts of terrorism), issues of blame and responsibility emerge as they do in cases of terrorism and other purposeful, premeditated acts such as disgruntled employees assaulting or killing coworkers, or sabotage. The use of the term “acts” at either end of Figure 2.2b connotes a more certain level of accountability in natural disasters (God) and terrorism or assault than is generally associated with technological disasters. Compared to natural disasters, responsibility for technological disasters is usually not so clearly delineated, though there are identifiable parties to hold accountable.



\*Based on Green (1982, 1996).

Figure 2.2a – Green's Continuum of Deliberateness for Traumatic Events\*

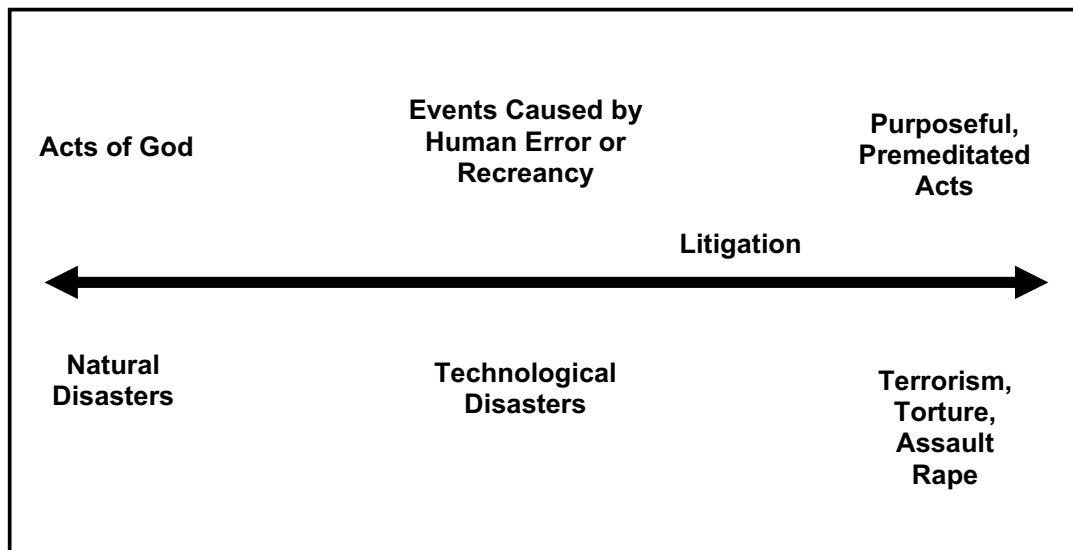


Figure 2.2b – Revised Continuum of Deliberateness for Traumatic Events

Table 2.4 – Erikson’s Classification of Disasters\*

Toxicity	Cause	
	(Human) Technological	(Nature) Natural
Non-Toxic	A e.g., fires, dam collapses, airplane crashes, explosions	B e.g., hurricanes, tornadoes, floods, earthquakes
Toxic	C e.g., oil spills, toxic chemical spills, radiation leaks, toxic waste sites	D e.g., radon gas contamination, na-tech scenarios

\*Erikson (1994:246).

Finally, natural and technological disasters are distinguishable with respect to perceived control over onset and resultant situations (Baum et al. 1983). Perceived *lack* of control is more commonly associated with natural disasters because they are seen as “acts of God” and usually are not preventable. There is a certain resignation on the part of natural disaster victims that the event and resulting damage was beyond their control, as well as beyond the control of any other party. On the other hand, individuals and communities that have experienced technological disasters tend to feel a *loss* of control. Technological disasters are seen as preventable as is the damage resulting from this type of disaster. Interestingly, this implies a belief that human beings have a level of control over their surroundings with the accompanying risk of losing this control.



Because technological disasters are a result of human error, blame becomes an important factor in discussing social and psychological responses to such events. Freudenburg's (1993, 2000) concept of "recreancy" offers insights on this subject. The term refers to "the failure of experts or specialized organizations to execute properly responsibilities to the broader collectivity with which they have been implicitly or explicitly entrusted" (Freudenburg 2000:116). Rather than using emotionally charged words such as blame, irresponsible, incompetent, or betrayal of trust, he adopted "recreancy" to distinguish between the processes or "facts" associated with institutional trust and emotional consequences of the breach of trust (Freudenburg 1993, 2000). "The word comes from the Latin roots *re-* (back) and *credere* (to entrust), and the technical use of the term is analogous to one of its two dictionary meanings, involving a retrogression or failure to follow through on a duty or a trust" (Freudenburg 2000:116).

As Freudenburg (1993, 2000) views it, recreancy stems from increased division of labor found in modern industrial societies, which has resulted in greater societal interdependence. This interdependence, reminiscent of Durkheim's "organic solidarity," has given rise to new forms of risk. Simmel (1950), in his discussion of knowledge, truth, and falsehood in human relations notes, "In a richer and larger cultural life [i.e., one like modern society], . . . existence rests on a thousand premises which the single individual cannot trace and verify to their roots at all, but must take on faith" (p. 313). With recreancy, trust is breached and faith in systems is no longer warranted. In modern society, risk and recreancy are inextricably linked.

Although the concept of recreancy is similar in some ways to Perrow's (1984) "normal accidents," the two concepts are qualitatively different. Perrow's (1984) focus is on the role technological malfunctions play in systemic breakdowns; these breakdowns are a function of "error-inducing systems" existing in modern society. Furthermore, Perrow (1984) points out, "Risks from risky technologies are not borne equally by the different social classes" (p. 310; also see Clarke and Short 1993). On the other hand, Freudenburg's (1993, 2000) attention is trained on issues of institutional trust. Some results of recreancy are loss of trust in institutions and organizations and an accompanying level of uncertainty and fear. These emotional responses translate into beliefs about the reliability of institutions and "lifescape," ultimately becoming factors in risk assessment. These are not merely shallow perceptions, subject to change. Instead, risk beliefs are deeply held convictions influencing day-to-day decision-making processes.

#### 2.4.3 Conceptual Distinctions Between Natural and Technological Disasters: Disaster Stage Models

Drawing upon research dating to the 1960s, it is possible to compare natural and technological disasters in a variety of ways, including etiology, damage characteristics, disaster phases, community impacts, and human impacts (Picou, Gill, and Cohen 1997). As presented in Table 2.3, differences between causes, damage characteristics, and phases of natural versus technological disasters are relatively straightforward. One approach to conceptualizing natural disasters is Drabek's (1986) eight-stage linear model

of progression: warning, threat, impact, inventory, rescue, remedy, recovery, and rehabilitation. In this model, the impact of a natural disaster is sudden, with a definable beginning and end. Technological disasters are not so clearly defined. Victims of technological disasters often find themselves caught in the warning, threat, and impact stages of Drabek's (1986) model, due to ambiguity surrounding biospheric contamination (Couch and Kroll-Smith 1989; Kroll-Smith and Couch 1990b). Freudenburg (1997) contends the simplest way to think about disasters is in three stages. The "before" and "after" phases both involve human actions and decision making, regardless of whether the disaster is defined as technological or natural. The distinction in this conceptualization lies with the intermediate stage, "the triggering event."

#### 2.4.4 Conceptual Distinctions Between Natural and Technological Disasters:

##### Community Impacts

Community impacts, human impacts, and event interpretation offer the most fertile ground for distinguishing between technological and natural disasters. Communities struck by technological disasters experience high levels of uncertainty and ambiguity associated with their situations. Accompanying this uncertainty is lack of consensus about what is evolving in once familiar surroundings. Kasperson and Pijawka (1985) suggest technological disasters differ from natural disasters because of the "unfamiliarity," "newness," and "lack of accumulated experience" associated with technological disasters (pp. 12, 17). Indeed, as Erikson (1991, 1994) suggests, technological disasters are "a new species of trouble." This idea of newness involves

groups of individuals defining and redefining situations associated with technological disasters.

Freudenburg and Jones (1991) and Kroll-Smith and Couch (1993b) discuss ways individuals and groups define their situations in the aftermath of natural and technological disasters. Following natural disasters (such as tornadoes, earthquakes, floods, and hurricanes), a “therapeutic” or “altruistic” community” is apt to emerge wherein victims find collective support in a “community of sufferers” experiencing “post-disaster utopia” (Barton 1969; Dynes 1970; Fritz 1961; Wolfenstein 1957). In this setting, community recovery is enhanced because people come together in a supportive way. The event is seen as an “act of God,” so there is no one to blame and the community is often the recipient of outside assistance, understanding, and other forms of benevolent behavior. Victims of natural disasters usually find considerable external support from organizations such as the Federal Emergency Management Administration (FEMA) or the Red Cross. When a natural disaster strikes, the process of rebuilding a community often leads to an “amplified rebound.” Communities affected by natural disasters may emerge stronger – economically and socially – than they were prior to the tragedy through “consensual adaptation” (Cuthbertson and Nigg 1987). There is no evidence in published research of amplified rebound in communities that have experienced technological disasters.

Because there is no collective definition of what is taking place in the wake of a technological disaster, individuals are forced to create their own definitions (Edelstein [1988] 2004, 2000; Fowlkes and Miller 1987; Gill and Picou 1998; Kroll-Smith and

Couch 1991b, 1993a, 1993b; Levine 1982). This situation results in the emergence of a “corrosive community” (Arata et al. 2000; Freudenburg and Jones 1991; Gill 1994; Gill and Picou 1998; Kroll-Smith 1995; Kroll-Smith and Couch 1991b, 1993a, 1993b; also see Cuthbertson and Nigg 1987). In corrosive communities, social relationships are altered, social support breaks down, and civil order is disrupted. Often, sharp divisions arise between those in a given community who perceive they have been physically or otherwise affected by a disaster – referred to by Levine (1982) as “maximalists” – and those who perceive no damage (“minimalists”) (also see Edelstein [1988] 2004, 2000; Kroll-Smith and Couch 1990b). Uncertainty abounds within the community and it is difficult to determine who is to be blamed and, ultimately, held responsible for the ensuing damage (e.g., a company, organization, agency, or individual). Additionally, outsiders offer little support because they do not fully understand what is taking place within a community affected by biospheric contamination (Edelstein [1988] 2004, 2000).

In the wake of technological disasters, communities undergo both a “lifestyle change” and a “lifescape change” (Edelstein [1988] 2004, 2000). The former refers to a disruption in “normal” patterns of everyday life, which occurs following both natural and technological disasters. The latter reflects a much deeper, fundamental disruption of underlying, taken-for-granted assumptions under which societies operate that occurs in the aftermath of technological disasters. “The lifescape reflects each individual’s way of embodying a larger shared societal paradigm in the context of personal life” (Edelstein 2000:131). Similar to the corrosive community concept, lifescape change results in feelings of isolation, abandonment, health concerns, distrust of others, distrust of the

environment, and loss of control (Edelstein [1988] 2004, 2000). As discussed earlier, *loss* of control is considered different from *lack* of control associated with natural disasters. Although lifestyle change results from both natural and technological disasters, lifescape change is more likely to accompany technological disasters.

#### 2.4.5 Conceptual Distinctions Between Natural and Technological Disasters: Human Impacts

The concept of stress has become increasingly important in disaster studies in the past three decades. There are a variety of reasons for this, ranging from academically oriented basic research interests and applied research to issues associated with disaster related litigation (Erikson 1976a, 1976b, 1994; Gleser, Green, and Winget 1981; Impact Assessment, Inc. 1990; Marshall, Picou, and Gill forthcoming; Palinkas et al. 1993a, 1993b; Picou and Rosebrook 1993) and implementation of post-disaster recovery, prevention, and intervention strategies (Fleming and Baum 1985; Freedy, Kilpatrick, and Resnick 1993; Freudenburg and Jones 1991; Gerrity and Flynn 1997; Hobfoll and Lilly 1993; Meichenbaum and Fitzpatrick 1993; Picou 2000). From each of these perspectives, there is value in different conceptualizations of stress.

Stress may be defined in a variety of ways. McGrath's (1970) definition states that stress is a "substantial *imbalance* between environmental demand and the response capability of the focal organism" (p. 17, italics in the original). Caveats associated with this definition incorporate notions of subjective perceptions of stress, expectations of being able to cope with stress and the anticipated consequences of a stressful situation,

and an understanding that there are quantitative and qualitative elements of stress (Hobfoll 1988). Pearlin (1989) points out that stress begins with an experience and that it is people's perceptions of an experience that determine whether it emerges as stressful or not. Similarly, Horowitz (1986) contends, "life events are always combined with internal meanings to create a situation that may or may not traumatize the individual" (p. 147). From a symbolic interactionist or social constructionist perspective, internal meaning is generated through interaction with others and individual interpretations of these interactions. For example, in Erikson's (1994) discussion of trauma, he notes that it necessarily has to be viewed in the context of life experiences, not simply as the result of a single, discrete event. He argues that "it is *how people react to them* rather than *what they are* that give events whatever traumatic quality they can be said to have" (Erikson 1994:229, italics in the original).

Psychology literature highlights three domains of the stress process: "stressors," "stress mediators," and "stress outcomes" (Pearlin 1989). Stressors are the causes of stress, which are generally divided into life events and chronic strains. Stress mediators are the mechanisms through which we mediate the impacts of stressors or stress outcomes. These include coping and social support. Stress outcomes refer to symptoms or manifestations of stress. Coping may be defined as "actions that people take in their own behalf as they attempt to avoid or lessen the impact of life problems" (Pearlin 1989:250). From a sociological standpoint, individuals and groups learn from one another how to do this.

#### *2.4.5.1 Conceptualizing Stress: Sociological and Psychological Approaches*

In well-intended efforts to positively impact the lives and mental well being of individuals, social scientists often overlook the importance of society's structural arrangements as they relate to stress. Indeed, the sociological nature of stress is often ignored, though it has long been understood that social arrangements contribute to stress (Pearlin 1983, 1989). Frequently, research on stress involves gathering demographic and contextual data to statistically control for patterns. It may be argued, however, that what is being considered simply "background noise" deserves closer attention (Pearlin 1989). Studying stress from a sociological perspective, it is evident that social systems influence stressors, stress mediators, and stress outcomes (Pearlin 1989). Studying social roles as sources of stress also provides rich research opportunities because roles are attached to social institutions such as family, occupation, and economy (Pearlin 1983). Values are another important sociological contribution to conceptualizing stress. An individual's values, internalized from interactions with others, mediate effects of events by regulating the meaning and relative importance of experiences (Kaplan 1983; Pearlin 1989; also see Kreps and Drabek 1996).

Importantly, sociological and psychological studies of disaster-related stress differ in purpose, theoretical focus, level of analysis, methodologies, and use of research findings. Broadly speaking, sociological research links stress and stress reactions to social and structural arrangements; psychological approaches focus on how individuals process stress, rather than sources of stress. Sociologists examining collective, disaster-related stress generally employ macro-level or middle-range theories. The primary



distinction between psychologically and sociologically oriented studies of stress is the type of questions they address (See Table 2.5). Psychological approaches focus on the individual, examining internal processes associated with responses to stress. From this perspective, there is little concern with social causes of stress (Pearlin 1983, 1989). Mirowsky and Ross (1989) refer to social stress as “distress.” Rather than attempting to diagnose mental illness, as in a psychological approach, a sociological approach looks for gradations in distress among groups of people. Noting Mills’ (1959) distinction between “public issues” and “personal troubles,” Mirowsky and Ross (1989) suggest it is possible to “explicitly and objectively measure feelings such as fear, anxiety, frustration, anger, guilt despair, depression, demoralization, joy, fulfillment, and hope, then map the relationship of these feelings to social conditions and positions” to arrive at social facts (p. 5).<sup>5</sup> Another distinction between sociological and psychological studies of stress is that the former are most often conducted in the field, whereas the latter are traditionally carried out in a laboratory setting (Mirowski and Ross 1989). Mirowsky and Ross’s (1989) work is noteworthy in that it combines the work of sociologists, demographers, psychologists, psychiatrists, epidemiologists, and social workers, underscoring the idea that “control” is the common theme across all social causes of distress. Again, recall the distinction between *loss* of control associated with technological disasters and *lack* of control associated with natural disasters.

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<sup>5</sup> From a strict social constructionist perspective there is some danger in considering anything to be a “social fact,” but Mirowsky and Ross (1989) might suggest a contextual constructionist approach.

Table 2.5 – A Comparison of Sociological and Psychological Approaches to Studying Disaster Related Stress\*

<u>Areas of Consideration</u>	<u>Sociological Approach</u>	<u>Psychological Approach</u>
Purpose or Theoretical Focus	<ul style="list-style-type: none"> <li>▪ Seeking to understand social causes or sources of stress, including the role that values play (structural, systemic, &amp; socially constructed meanings of stress)</li> <li>▪ Relating roles, role sets, &amp; institutional affiliations to stress</li> <li>▪ Discerning similar types, levels, &amp; patterns of stress among groups</li> <li>▪ Discerning group patterns of behavior in response to stress</li> </ul>	<ul style="list-style-type: none"> <li>▪ Diagnosing mental illness</li> <li>▪ Decreasing psychological pathology</li> </ul>
Level of Analysis	<ul style="list-style-type: none"> <li>▪ Group, community, or societal – collective</li> <li>▪ Macro level or middle-range</li> </ul>	<ul style="list-style-type: none"> <li>▪ Individual</li> <li>▪ Micro level</li> </ul>
Source of Stress	<ul style="list-style-type: none"> <li>▪ Social/structural</li> <li>▪ Role changes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Primary focus is on individuals’ internal processing of stress rather than causes of stress</li> <li>▪ Life change events</li> </ul>
Methodological	<ul style="list-style-type: none"> <li>▪ Field research</li> <li>▪ Often use self-administered instruments/questionnaires</li> <li>▪ Collect &amp; use demographic &amp; other “contextual” data to analyze patterns &amp; trends</li> <li>▪ Combine individual &amp; collective level variables</li> </ul>	<ul style="list-style-type: none"> <li>▪ Often require controlled experimental setting</li> <li>▪ Clinician administered instruments, questionnaires, or interviews; self-administered also employed</li> <li>▪ Collect &amp; use demographic &amp; other “contextual” data to statistically control for certain factors</li> </ul>
Use of Research Findings	<ul style="list-style-type: none"> <li>▪ Plan community level intervention strategies</li> <li>▪ Advise policy makers</li> <li>▪ Litigation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Suggest treatment for individuals</li> <li>▪ Advise policy makers</li> <li>▪ Litigation</li> </ul>

\*See Barton (1969); Erikson (1976a, 1994); Gillespie (1988); Hobfoll and Jackson (1991); Kaplan (1983); Mirowsky and Ross (1989); Pearlin (1983, 1989); Picou, Formichella, and Arata (forthcoming). 73

In his examination of dimensions of disasters, Barton (1969) is “more concerned with the *social consequences* of behavior than with the inner processes that cause it; the emphasis is sociological rather than psychological” (p. 53, italics in the original). Barton’s (1969) interest lies with how social systems respond to stress. In undertaking a scientific study of society, sociologists seek to uncover patterns of behavior among groups of people who share similar social characteristics and live in similar circumstances. It follows that, “The essential element of the sociological study of stress is the presence of similar types and levels of stress among people who are exposed to similar social and economic conditions, who are incumbents in similar roles, and who come from similar situational contexts” (Pearlin 1989:242). Thus, sociological studies of stress emphasize social-structural stressors.

Stress is linked to social structure. Barton’s (1969) conceptualization of collective stress captures this notion: “[C]ollective stress occurs when *many members of a social system fail to receive expected conditions of life from the system*” (p. 38, italics in the original). This theory of collective stress combines individual and collective level variables (Gillespie 1988). Barton (1969) proposes collective stress can arise from internal or external sources. External stress includes large unfavorable changes in a system’s environment (e.g., natural disasters or attacks from outside the system). Internal stress refers to massive social disorganization (e.g., political revolutions or economic depression). In either case, the focus is on systemic sources of stress. Barton (1969) further contributes to the foundation of sociological stress theory with his concepts of the “altruistic community” and the “therapeutic community.” In defining these, he draws on Wolfenstein’s (1957) “post-disaster utopia” and Fritz’s (1961) “community of sufferers.”

Erikson (1994) discusses psychological and social aspects of trauma. He argues conceptual distinctions between trauma and stress have become blurred, but that both terms can be applied to the psychological and the social. In the classical sense, trauma refers to the actual “blow” to tissues of the body or to structures of the mind, not to the injury inflicted by it (Erikson 1976a, 1994). There has been a shift in this definition to include not only the blow, but stress caused by the blow, as well (Erikson 1976a, 1994). It is people’s response(s) to the event (or blow) that gives events their traumatic quality. “[T]rauma has to be understood as resulting from a *constellation of life experiences* as well as from a discrete happening, from a *persisting condition*, as well as from an acute event” (Erikson 1994:229, italics in the original). Given this description, trauma is similar to stress. Also like stress, trauma has a social dimension that has the potential to bring communities together or divide them. Individual trauma – the focal point of psychological studies of stress – is “a blow to the psyche that breaks through one’s defenses so suddenly and with such brutal force that one cannot react to it effectively” (Erikson 1976a:153). Collective trauma – the focus of sociological studies – is “a blow to the basic tissues of social life that damages the bonds attaching people together and impairs the prevailing sense of communality” (Erikson 1976a:154). Technological disasters result in collective trauma, which causes social disruption that is reflected in the emergence of a corrosive community.

#### 2.4.5.2 *Theories of Stress in Disaster Research*

There is a growing body of empirical literature documenting immediate and long-term psychosocial impacts of technological disasters such as Buffalo Creek (West

Virginia, 1972), Three-Mile Island (Pennsylvania, 1979), Bhopal (India, 1986), Chernobyl (Russia, 1986), Love Canal (New York, 1978), and the *Exxon Valdez* oil spill (Prince William Sound, Alaska, 1989) (Arata et al. 2000; Baum and Fleming 1993; Baum et al. 1983; Bogard 1989; Brown and Harris 1979; Davidson and Baum 1991; Grace et al. 1993; Green et al. 1990a; Gill and Picou 1991, 1997, 1998, 2001; Houts et al. 1988; Levine 1982; Palinkas et al. 1993a; Picou and Arata 1997; Picou and Gill 1997; Picou, Gill, and Cohen 1997; Picou et al. 1992; Rodin et al. 1992; Shrivastava 1987; Weisath 1991). Sociological and psychological studies of these technological disasters, as well as those of natural disasters, usually employ some measure of stress, depression, or coping in their design. Picou and Gill (1997) contend empirical evidence distinguishing mental health effects of technological disasters from natural disasters signifies a paradigm shift in disaster research. This shift involves changes in theoretical approaches to disaster studies, as well as a movement toward longitudinal research designs extending beyond the months immediately following a disaster.

Distinctions between natural and technological disasters have emerged and been confirmed in large part due to empirical research documenting long-term negative mental health outcomes and social impacts for victims of technological disasters (Ahearn and Cohen 1984; Arata et al. 2000; Baum and Fleming 1993; Baum, Fleming, and Singer 1983; Baum et al. 1992; Bogard 1989; Couch and Kroll-Smith 1985; Edelstein [1988] 2004, 2000; Erikson 1976a, 1991, 1994; Gill and Picou 1991, 1997, 1998; Gleser, Green, and Winget 1981; Grace et al. 1993; Green et al. 1990a, 1990b; Holen 1991; Kroll-Smith 1995; Kroll-Smith and Couch 1990a, 1990b, 1991a, 1993a, 1993b; Picou and Arata 1997; Picou and Gill 1997; Picou, Formichella, and Arata forthcoming; Picou, Gill, and Cohen

1997; Picou et al. 1992; Rangel 1976; Titchener and Kapp 1976). Sociological and psychological studies indicate these outcomes differ from those experienced by victims of natural disasters (e.g., tornadoes, earthquakes, hurricanes, or floods). Research indicates this stems in part from the perceived cause of a disaster, that is, whether it is an “act of God” or human-caused event (Baum et al. 1983, 1992; Picou, Gill, and Cohen 1997; Smith and North 1993; Tierney and Baisden 1979). Again, caution should be exercised in outlining these approaches lest the terms and distinctions between the two types of disasters and their impacts become reified. As will be discussed in Chapter III, employing a contextual constructionist perspective including empirical evidence offers some level of protection from reification.

Uncertainty or “ambiguity of harm” surrounding technological disasters – including extent and consequences of contamination often associated with disasters – contributes to chronic stress (Davidson and Baum 1991; Edelstein [1988] 2004, 2000; Erikson 1991; Fowlkes and Miller 1987; Freudenburg and Jones 1991; Horowitz 1986; Kroll-Smith and Couch 1993b; Vynner 1988). Chronic feelings of demoralization, loss of ability to cope, depression, anger, frustration, fear, brooding, paranoia, alienation, distrust, low self-esteem, and diminished self-worth have all been associated with exposure to technological disasters (Ahearn and Cohen 1984; Arata et al. 2000; Baum and Fleming 1993; Baum and Singer 1983; Baum et al. 1983, 1992; Bogard 1989; Couch and Kroll-Smith 1985; Edelstein [1988] 2004, 2000; Erikson 1976a, 1976b, 1991, 1994; Gill and Picou 1991, 1998; Gleser, Green and Winget 1981; Grace et al. 1993; Green et al. 1990a, 1990b; Holen 1991; Horowitz 1986; Picou et al. 1992; Kroll-Smith 1995; Kroll-Smith and Couch 1990a, 1990b, 1991a, 1991b, 1993a, 1993b; Picou and Gill 1997;

Picou, Gill, and Cohen 1997; Rangell 1976; Rodin et al. 1992, 1997; Titchener and Kapp 1976). Victims of technological disasters also experience stress as a result of secondary disasters such as relocation (Erikson 1976a, 1976b) and prolonged litigation (Brown and Mikkelsen [1990] 1997; Gill and Picou 1998; Hirsch 1997; Picou, Marshall, and Gill 2004; Picou and Rosebrook 1993).

Moreover, technological disasters tend to create a “corrosive” community in which a lack of consensus is predominant (Freudenburg and Jones 1991; Gill and Picou 1991, 1997, 1998, 2001; Kroll-Smith 1995; Kroll-Smith and Couch 1991b, 1993a; also see Cuthbertson and Nigg 1987). Victims of technological disasters often experience intrusive thoughts or engage in avoidance behaviors in attempts to avoid situations that remind them of the event (Horowitz 1986). Conversely, research findings indicate occurrences of long-term social and psychological disruption are rare in the wake of natural disasters (Ahearn and Cohen 1984; Barton 1969; Drabek 1986; Freedy et al. 1994; Gerrity and Flynn 1997; Green and Lindy 1994; Kreps 1984; Smith et al. 1986).

In the past four decades, there have been various instruments designed in an effort to validly and reliably measure stress and related symptoms of depression and coping. The most widely used of these standardized instruments are the *Impact of Event Scale* (IES) (Horowitz 1974, 1986; Horowitz, Wilner, and Alvarez 1979), *Structured Clinical Interview for DSM III* (SCID) (Spitzer and Williams 1986), and the *Symptom Checklist-90R* (SCL-90R) (Derogatis 1983).

The IES (Horowitz 1974, 1986; Horowitz, Wilner, and Alvarez 1979) has proven to be a valid and reliable measure in studies of both natural and technological disasters (Gill and Picou 1998; Grace et al. 1993; Palinkas et al. 1993b; Picou and Gill 1997; Picou

et al. 1992; Seidner, Amick, and Kilpatrick 1988; Shore et al. 1989; Solomon 1989; Zilberg, Weiss, and Horowitz 1982). The IES is a subjective measure of stress based on a fifteen-item scale. The scale is anchored to a specific event, as well as a specified time frame (usually the past seven days). In disaster studies, the event is the occurrence of the disaster itself. The theory underlying the IES distinguishes between “intrusive stress” and “avoidance behaviors.” The concept of intrusive stress suggests that stress results in unbidden thoughts, images, troubled dreams, strong pangs or waves of feelings, and repetitive behavior (Horowitz et al. 1979). Avoidance behaviors are manifested in ideation constriction, denial of meanings and consequences of an event, numbed sensations, behavior inhibition, attempts to avoid fearful situations, and awareness of emotional numbness (Horowitz et al. 1979).

When incorporated into a research design including other indicators, the IES can demonstrate relationships between event-specific stress and perceived social disruption. Socioeconomic and demographic variables such as age, sex, income, occupation, marital status, and so forth can assist sociologists in developing an understanding of patterns of stress among groups of people. Items measuring extent of exposure to disaster, including secondary effects associated primarily with technological disasters (e.g., involvement in prolonged litigation, relocation, or participation in activities associated with disaster remediation such as cleanup), should also be developed and examined in conjunction with the IES (Gill and Picou 1998; Palinkas et al. 1992, 1993b; Picou and Gill 1997; Picou et al. 1992, 2001). Indicators associated with social disruption, including items such as perceived effectiveness of local government, outmigration intent, and perceived



closeness of community also lend to a broad understanding of perceived social disruption.

Several disaster studies have utilized the *Structured Clinical Interview for DSM III* (SCID) (Spitzer and Williams 1986) and the *Symptom Checklist-90R* (SCL-90R) (Derogatis 1983) (e.g., Arata et al. 2000; Gill 2002; Gleser et al. 1981; Grace et al. 1993; Green and Lindy 1994; Green et al. 1990; Picou, Johnson, and Gill 2001). Others have used the *Diagnostic Interview Schedule* (DIS) (e.g., Canino et al. 1990; Palinkas et al. 1993a, 1993b; Smith et al. 1986). Examining event-specific stress using the IES in conjunction with other psychological measures is perhaps most effective. Combining these different measures allows for a more complete understanding of collective patterns of psychological stress, including PTSD (Post Traumatic Stress Disorder), and coping mechanisms associated with them (Davidson, Smith, and Kudler 1989; Shore et al. 1989). Numerous studies have employed the IES with the SCID (e.g., Spitzer and Williams 1986) and/or the SCL-90R (e.g., Derogatis 1983; Grace et al. 1993; Picou and Gill 1997; Picou et al. 1992; Picou, Marshall, and Gill 2004).

Hobfoll's (1988, 1989, 1991) conservation of resources (COR) model of stress has been employed in natural disaster research (e.g., Freedy et al. 1992, 1994; Kaiser et al. 1996) and more recently, has made its way into the purview of sociologists studying technological disasters (e.g., Arata et al. 2000; Picou and Gill 1997). The COR model is a psychological approach proposing stress results from loss of resources, threat of resource loss, and/or when resources are invested without gain or return. From this perspective, resource loss disproportionately outweighs the impacts of resource gain (Hobfoll 1988, 1989, 1991; Hobfoll and Lilly 1993). The COR model elucidates four types of resources:

(1) objects (e.g., transportation, shelter, physical possessions); (2) conditions (e.g., a good marriage, employment, seniority, tenure); (3) personal characteristics (e.g., high self-esteem, sense of mastery, social competence, sense of optimism); and (4) energies (e.g., money, time, knowledge). According to Hobfoll (1991), when loss of one type of resource is experienced, this often results in loss or depletion of other types of resources. Conversely, resource gain in one area tends to produce gains in other areas. Furthermore, traumatic stress results in rapid loss of resources that are typically resources of highest value (e.g., loss of a loved one, divorce, involuntary termination from employment) (Hobfoll 1991). These traumatic stressors attack individuals' and communities' basic values, occur unexpectedly, place excessive demands on individual and collective resources, are beyond the "normal" scope of resource utilization, and leave behind a powerful mental image of loss (Hobfoll 1991).

When trauma impacts a group or community, once-stable resources – such as social support networks – are taxed (Hobfoll 1991). An application of the COR approach is especially appropriate in sociologically oriented studies of stress and disaster, because it allows researchers to frame questions with respect to social arrangements such as socioeconomic status and institutional affiliation. Items measuring resource loss provide researchers with a picture of perceived resource loss that can be linked to other variables. Thus, the COR model has the capacity to tap into personal as well as social resources, reaching into the realm of the sociological (Hobfoll, Lilly, and Jackson 1992).

#### 2.4.6 Conceptual Distinctions Between Natural and Technological Disasters: Event

##### Interpretation

The world in which we live is inherently fraught with risks. Risk is both socially constructed and objectively measurable and, as such, is best approached from a contextual social constructionist perspective. Although humans have always lived with risks, some social scientists argue that the complexity of modern society has increased the number of risks society faces. Some risks may be considered choices (e.g., crossing a busy street or living in an earthquake zone or tornado alley); others afford individuals little or no control (e.g., a train derailment near a community that spills hazardous chemicals into the water supply). Assessment of risk and selection of what are and are not acceptable risks are at once personal and collective decisions. In many cases where individuals are concerned, the “choice” or “decision” about what is acceptable has become institutionalized and risk is no longer a consideration. An example of this is the September 11, 2001 terrorist attacks on the Pentagon and the World Trade Center. The idea that a plane might be used as a weapon of mass destruction was not collectively considered to be a risk, although some individuals or relatively small groups of individuals may have thought so. On a different level, a majority of the U.S. population collectively puts their faith in a food distribution system of which they have limited knowledge; other individuals consider purchasing food at a local grocery a risky endeavor. In general, perceptions of risk are based on personal and collective experiences, whether these experiences are quantifiable or qualitative. It may be argued that risk assessment by “professionals,” “experts,” or laypersons is a process of social constructionism.

Beck's (1992) "risk society" and Giddens' (1990, 1991) "risk culture" perspectives tie risk to conditions of late modernity. The risk society perspective focuses on individualization, increased reflexivity found in contemporary societies, the expanding role of expertise, the preoccupation of societies with certain low-probability/high consequence events, decreasing trust in institutions, and globalization (Cohen 2000; Lupton 1999a). Beck (1996) takes a contextual constructionist stance, stating that risks are "social constructs which are strategically defined, covered up or dramatized in the public sphere with the help of scientific material supplied for the purpose" (from Lupton 1999a:60). He defines reflexivity not as mere reflection, but as critical self-confrontation. Increased individualization brings with it risk and uncertainty. "Life becomes less certain even while it is placed more under one's control" (Lupton 1999a:71).

Giddens (1990, 1991) places a greater emphasis on trust than Beck (1992). Giddens argues "ontological security" – confidence, faith, or individuals' trust in their identities and their surroundings – is critical for emotional survival in a risk culture; without it, society could not function (1990, 1991). Table 2.6 provides a comparative overview of Beck and Giddens' work.

Table 2.6 – A Comparative Overview of Beck &amp; Giddens\*

<b>BECK</b>	<b>GIDDENS</b>
<p><b>Macro-level approach to studying risk</b></p> <p><b>The concept of risk has emerged from the processes of modernization</b></p> <p><b>The character of risk has changed; impacts across space &amp; time are greater</b></p> <p><b>Political aspects of risk are an important focus; reflexivity has emerged in response to uncertainty &amp; insecurity</b></p> <p><b>Expanding role of expertise</b></p> <p><b>Preoccupation with low probability/high consequence events</b></p> <p><b>Espouse a contextual social constructionist perspective</b></p>	
<p><b>Risk reflexivity is the result of a greater number of risks being produced in the late modern era</b></p>	<p><b>The number of risks is not any greater, they are only thought to have increased</b></p>
<p><b>Reflexivity is a critique of expertise as a result of distrusting expert systems</b></p>	<p><b>Reflexivity takes place through expert systems; lay people must trust them</b></p>
<p><b>Greater focus on individuals' role(s) in reflexive critique of the social; challenges current social system</b></p>	<p><b>Greater focus on self-reflexivity</b></p> <p><b>Trust &amp; "ontological security"</b></p>

\*Based on Lupton (1999a) and Cohen (2000).

Lupton's (1999a, 1999b) commentary on risk and sociocultural theory provides valuable discourse in this realm, as well. According to her framework, a realist perspective is manifested in terms of technico-scientific approaches to risk combining danger with calculations of probability (Lupton 1999a). This cognitive science perspective, as found in engineering, statistics, the insurance industry, psychology, epidemiology, and economics does not take into account social and cultural contexts of risk (Lupton 1999a; also see Clarke and Short 1993). These contextual factors of risk

have generally been the domain of sociologists, anthropologists, philosophers, historians, and to some extent, geographers employing either a weak/contextual constructionist approach or a strong/strict constructionist approach.<sup>6</sup> Lupton's (1999a, 1999b) work addresses several theoretical approaches to risk: cultural/symbolic, risk society, and governmentality. Cultural symbolic analyses are exemplified in the writings of Douglas and Wildavsky (1982), who emphasize that risk assessment is culturally influenced and socially constructed.

Studying human responses to technological disasters offers sociologists an opportunity to better understand processes associated with constructing and assessing risk and perhaps shed some light on what risks are acceptable or not acceptable. Technological disasters and resulting environmental contamination represent not only "a new species of trouble," but a special brand of risk, as well. Although it is highly unlikely that any "evidence" provided through empirical research would keep technological disasters from occurring, it is possible that research efforts and continued theory development will have policy implications for risk assessment, risk management, and applications in supporting community recovery, rehabilitation, and transformation in the aftermath of technological disasters. Sociologists have an opportunity to provide information for the proverbial "cost-benefit analysis" of risk. Risk is socially constructed and, for better or for worse, sociologists have a role to play in this construction (e.g., see Couch, Kroll-Smith, and Kindler 2000; Picou 2000).

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<sup>6</sup> For a detailed discussion of social constructionism, see Chapter III of this dissertation.

#### 2.4.7 Summary of Natural vs. Technological Disasters

Since the 1960s, social research has emerged distinguishing technological from natural disasters. Early definitions of disaster accounted only for physical impacts and assessment of those impacts; based on empirical data, definitions of disasters emerged couching disaster events in the context of their social causes and impacts. Although empirical findings suggest differing etiology, physical damage characteristics, disaster phases, community impacts, human impacts, and event interpretation in natural and technological disasters, these distinctions are socially constructed and should not be reified. However, it is important and valid to consider different conceptualizations of disasters.

Social construction of events surrounding natural and technological disasters is most evident with respect to community impacts, human impacts, and event interpretation. Lack of consensus regarding the nature and extent of physical damage resulting from technological disasters leads to individual and collective uncertainty. When there is no collective definition of reality, such as in the wake of a technological disaster, individuals are forced to construct and reconstruct their own realities. One result of this process is social disruption, which emerges in the form of a corrosive community. In contrast, a therapeutic community is more likely to emerge following a natural disaster.

In the aftermath of technological disasters, communities and residents in them experience stress, lifestyle change, and lifescape change. Although stress and lifestyle change also take place following natural disasters, they are most often short-term. Conversely, victims of technological disasters experience lifescape change including loss

of ontological security, feelings of blame and anger resulting from recreancy. Consequently, communities experiencing trauma accompanying technological disasters may feel “outsiders just don’t understand.”

## **2.5 Research Questions**

Ecological degradation resulting from technological disasters triggers a complex set of organizational activities, as well as individual and collective psychological processes. These processes result in personal, social, and cultural change (Kroll-Smith and Couch 1991b). In broad terms, an effective treatment of the research questions presented below employs social capital theory, disaster research, research on stress and coping, and risk theory. Combined, these approaches provide a basis for presentation and interpretation of qualitative research findings. They also afford an opportunity to revisit more than a decade of quantitative, empirical evidence on social and psychological impacts of the EVOS from a new perspective. Examining these qualitative and quantitative data in light of social capital theory offers new insights into complex macro- and micro-level impacts associated with technological disasters.

The primary purpose of this dissertation research is to explore the potential of social capital theory for advancing our understanding of community impacts from technological disasters. With few exceptions (e.g., Endter-Wada et al.; Reynolds 1993; Rodin et al. 1997), EVOS research to date has been quantitative, using instruments designed to measure spill related stress, resource loss, and social disruption. Using methods detailed in Chapter III, this dissertation addresses the following research questions:



1. How do the ecological-symbolic approach and renewable resource community concept contextualize social capital when environmental degradation occurs as a result of a technological disaster?
2. What relationships exist between social capital and recreancy following a technological disaster?
3. What relationships exist between social capital, individual stress, and collective trauma in the aftermath of a technological disaster?
4. What relationships exist between social capital and emergence of a corrosive community in the wake of a technological disaster?
5. What relationships exist between social capital, lifestyle change, and lifescape change following a technological disaster?
6. What relationships exist between social capital and secondary disasters associated with a technological disaster?

*Research Question 1: How do the ecological-symbolic approach and renewable resource community concept contextualize social capital when environmental degradation occurs as a result of a technological disaster?*

The ecological-symbolic perspective and RRC concept provide an important foundation for considering social capital in Cordova. The ecological-symbolic approach to disaster research asserts the type of environment that is damaged, as well as a community's relationship to that environment, influences community recovery and interpretive processes. Because of their close relationship with the environment, RRCs are particularly vulnerable to risks associated with ecological degradation. Combined, the

ecological-symbolic approach and concept of an RRC “flavor” the following commentary on change in social capital in Cordova following EVOS. Because RRCs are dependent on seasonal cycles in the ecosystem, it may be argued the people residing in them are more in tune with the environment and more socially, culturally, economically, and psychologically susceptible – collectively and individually – to risks associated with biospheric contamination (Gill 1994; Gill and Picou 1997, 2001; Picou and Gill 1997). Although trust and association are cross-cutting forms of social capital – as are information, norms, expectations, reciprocity, and authority relations – these distinctly manifest themselves in an RRC as a direct result of issues identified in the ecological-symbolic approach. Specifically, because the exchange relationship between humans and humans and their environment in PWS is so strong and has been so significantly disrupted since EVOS, the community of Cordova has experienced both a cultural change and a social structural change. Empirical evidence presented in this dissertation and elsewhere (e.g., Arata et al. 2000; Gill 1994; Gill and Picou 1997, 2001; Picou and Gill 1997; Picou et al. 1992) suggests these changes have generated collective stress, which hinders a group’s ability to address other issues it may be facing (Kroll-Smith and Couch 1993b). This is similar to social capital research suggesting communities with diminished social capital are less able to resist threats or take advantage of opportunities (e.g., Putnam 2000).

Furthermore, it may be argued that subsistence activities in an RRC are a defining form of social capital. For example, an exchange of harvested natural resources between Cordovans is not simply a transfer of goods, as with financial or physical capital, rather, this symbolic sharing – a distinct form of association – generates trust and further

association, the primary components of social capital (Paxton 1999). Recall that outcomes of social capital are social cohesion, economic achievement, and more social capital (Field, Schuller, and Baron 2000). Individuals' narratives of social and economic life in Cordova since EVOS, as well as reported levels of subsistence activities, offer innovative ways of capturing and examining social capital in Cordova, thus addressing this first research question.

*Research Question 2: What relationships exist between social capital and recreancy following a technological disaster?*

The purpose of this research question is to theoretically relate the notion of recreancy to social capital. Freudenburg's (1993, 2000) concept of recreancy speaks to loss of trust in institutions and organizations. To reiterate, recreancy is "the failure of experts or specialized organizations to execute properly responsibilities to the broader collectivity with which they have been implicitly or explicitly entrusted" (Freudenburg 2000:116). According to MacGillivray and Walker (2000), formal social capital represents trust in organizations. Paxton (1999) sees this as "abstract" trust in people, institutions, or systems versus specific trust between individuals, much like Giddens' (1990) discussion of trust in expert systems. (Informal social capital is mutual trust between individuals, which will be attended to in research questions four and five.)

Technological disasters give rise to feelings of recreancy and loss of trust in "the system," especially among victims. This disrupts ontological security, as will be discussed in research questions four and five. Social capital is limited in communities and/or societies where there is diminished trust. Thus, recreancy reduces formal social

capital – particularly components of services provided and organizational effectiveness. Research findings presented in this dissertation provide empirical evidence that not only did EVOS generate feelings of recreancy among Cordovans, but that this pattern also affected formal social capital in the Cordova community.

*Research Question 3: What relationships exist between social capital, individual stress, and collective trauma in the aftermath of a technological disaster?*

Conceptual distinctions between natural and technological disasters have primarily developed as a result of empirical research of social and psychological impacts of disaster events. As previously discussed, numerous empirical studies have addressed important questions about social and psychological impacts of technological disasters. For example, quantitative research has established that technological disasters produce higher levels of chronic and long-term stress than natural disasters (Ahearn and Cohen 1984; Arata et al. 2000; Baum and Fleming 1993; Baum and Singer 1983; Baum et al. 1983, 1992; Bogard 1989; Couch and Kroll-Smith 1985; Drabek 1986; Edelstein [1988] 2004, 2000; Erikson 1976a, 1991, 1994; Freedy et al. 1994; Gerrity and Flynn 1997; Gill and Picou 1991, 1998; Gleser, Green, and Winget 1981; Grace et al. 1993; Green and Lindy 1994; Green et al. 1990a, 1990b; Holen 1991; Horowitz 1986; Kreps 1984; Kroll-Smith 1995; Kroll-Smith and Couch 1990a, 1990b, 1991a, 1991b, 1993a, 1993b; Picou and Gill 1997; Picou, Gill, and Cohen 1997; Picou et al. 1992; Rangell 1976; Rodin et al. 1992; Smith et al. 1986; Titchener and Kapp 1976; also see Barton 1969; Fritz 1961; Wolfenstein 1957). Technological disasters tend to generate chronic, long-term negative mental health outcomes that natural disasters do not.

Because stress is associated with social structure it is reasonable to contend that social capital, which is also tied to social structure, is affected by individual and collective stress. Stress reactions, including collective trauma (Erikson 1976a) following technological disasters result in changes in social dynamics, the way people and groups relate. What may be referred to as negative changes in associations – e.g., if associations break down or communication is diminished such as in the aftermath of a technological disaster – represent a change in social capital as well. When social interaction (association) decreases, trust is not fostered to the same extent as previously, which may generate additional stress.

When trauma impacts a group or community, once-stable resources – such as social support networks – are taxed (Hobfoll 1991). Using Hobfoll's (1988, 1989, 1991) COR model of stress to examine stress following technological disasters it is possible to discuss how loss of social capital, threat of loss of social capital, or investment of social capital without gain or return generates individual and collective stress (e.g., Arata et al. 2000; Picou and Gill 1997). When loss of one type of resource is experienced, this often results in loss or depletion of other types of resources (Hobfoll 1991). Conversely, resource gain in one area tends to produce gains in other areas. From this perspective, if social capital is considered a form of resource, it is reasonable to expect changes in social capital to influence availability of other resources.

Considering an extreme, if just one individual or family in a community were experiencing stress (e.g., as a result of a house fire or serious illness) it would be possible and even probable that the community would rally around them, providing support, encouragement, and a variety of other resources. Well-connected communities rich in

social capital and other forms of capital (i.e., physical capital, human capital) are in a position to offer such assistance. Conversely, when virtually everyone in a community has been affected by an event such as the EVOS, energies and resources to lend support are limited.

Stress reactions to technological disasters may include coping strategies that play a role in diminishing social capital. For example, if avoiding reminders of a traumatic event such as the EVOS is a coping strategy for some individuals, frequency and quality of association with others may decline (e.g., Arata et al. 2000). According to social capital research, this in turn affects information flow, trust, and norms of reciprocity.

*Research Question 4: What relationships exist between social capital and emergence of a corrosive community in the wake of a technological disaster?*

Empirical evidence suggests social disruption in the form of a corrosive community emerges in the wake of technological disasters (Freudenburg and Jones 1991; Gill 1994; Gill and Picou 1998; Kroll-Smith 1995; Kroll-Smith and Couch 1991b, 1993a, 1993b; Picou, Marshall, and Gill 2004; also see Cuthbertson and Nigg 1987). A corrosive community is characterized by social disruption, uncertainty, lack of consensus about what is taking place, and who should be held responsible for a disaster (i.e., who was “recreant”). The corrosive community phenomenon is further exacerbated because outsiders are not in a position to fully understand and thus offer limited support.

A review of technological disaster studies suggests corrosive communities may be reconceptualized with respect to loss of social capital. Generally speaking, a corrosive community may be viewed as a community where social capital is diminished. Moreover,

a corrosive community accompanying a technological disaster involves disruption or potential disruption of relationships, thus affecting social structure. Coleman (1990) insists stability of social structure is a critical factor influencing creation and depletion of social capital. “Disruption of social organization or of social relations can be highly destructive to social capital” (Coleman 1990:320). Arguably, social disruption accompanying technological disasters influences available social capital for individuals and communities at large because it affects associations among individuals and groups. Associations – regular informal and formal interactions with others – are critical sources of trust, information, communication, social support, and benefits of norms of reciprocity (including both generalized and specific reciprocity). When social structures are altered, associations are likely to change as well; when association or interaction is diminished, opportunities for information flow, consensus building, and development of shared understanding are limited (Picou, Marshall, and Gill forthcoming). Without information flow, facilitated by interaction, there is limited basis for effective collective action. Furthermore, when there are few shared assumptions about the nature and extent of damage in the wake of a technological disaster, this fosters uncertainty, distrust, and individual and collective stress. Distrust is manifested at a micro level among individuals (informal social capital) and at a macro level with respect to trust in groups, organizations, and systems (formal social capital). Thus, the relationship between a corrosive community and social capital potentially affects not only individuals, but also community effectiveness as a whole.

*Research Question 5: What relationships exist between social capital, lifestyle change, and lifescape change following a technological disaster?*

Stress, lifestyle change, and lifescape change are mutually influential. To cope with stress following a technological disaster, individuals and communities change daily routines – couched as lifestyle change by Edelstein ([1988] 2004, 2000). In terms of social capital, this may mean changes in association as well as diminished opportunities to generate informal social capital. Lifestyle changes produce additional individual and collective stress; moreover, it leads to lifescape change, which also may be stress inducing. Changes in lifescape may further impact lifestyle. This cycle of coping and processes of lifestyle and lifescape changes affect social capital, particularly in situations such as the EVOS where protracted litigation offers little or no immediate resolution or restitution for victims.

When considering lifescape change in the aftermath of a technological disaster it is useful to consider how risk theory is related to social capital. For example, one of the primary forms of social capital, trust, is inherent in the concept of ontological security and issues related to recreancy associated with technological disasters. Concerns about recreancy translate into beliefs about reliability of institutions and lifescape – formal social capital. Changes in lifescape influence day-to-day decision-making processes. Challenges to individuals' beliefs threaten ontological security, defined by Giddens (1990) as “the confidence that most human beings have in the continuity of their self-identity and in the constancy of the surrounding social and material environments of action” (p. 92). This in turn influences community level interactions.



Because there are few shared assumptions (i.e., no consensus) as to what is taking place following a technological disaster, norms of reciprocity – an important form of social capital – are challenged. Generalized reciprocity, referred to by Paxton (1999) as “abstract trust” in groups, organizations, or systems declines as ontological security is diminished. This is further exacerbated when people outside an impacted community do not understand social impacts of technological disasters. Specific reciprocity also wanes where trust in others is lacking. These issues of reciprocity intersect with formal and informal social capital.

*Research Question 6: What relationships exist between social capital and secondary disasters associated with a technological disaster?*

There is evidence that secondary impacts of technological disasters (also referred to as secondary disasters) – primarily, ongoing litigation – are correlated with chronic stress among individuals and communities involved with litigation processes (Brown and Mikkelsen [1990] 1997; Gill and Picou 1998; Hirsch 1997; Picou, Marshall, and Gill 2004; Picou and Rosebrook 1993). Erikson (1976a) introduced this concept in his study of Buffalo Creek where a secondary disaster was relocation of survivors. This dissertation research proposes technological disasters diminish social capital. It follows that social impacts of secondary disasters associated with technological disasters also detract from available social capital. Chronic stress, lifestyle change, and lifescape change accompanying disaster related litigation alter social relationships including associations and trust. Research findings indicate a number of families have left the Cordova community or spend considerably less time there as a result of economic

conditions since the EVOS. Each time a family or individual moves, even if that family or individual is “replaced” by another, social capital (as well as human capital) is diminished at least temporarily. The notion that outsiders just don’t understand is also true to some extent for newcomers to a community like Cordova; the experience base is simply not available and consensus that may have been reached (though not likely) among locals who experienced the spill may cause further social fissures. Furthermore, individuals and families who move from a community where a technological disaster has taken place may experience challenges “outside,” with others not understanding their circumstances. It is reasonable to think that social capital developed elsewhere may offset these difficulties of relocation.

The initial “blow” of a technological disaster to a community constitutes a considerable threat to social capital. Subsequent secondary disasters further tax already depleted “stores” of social capital, as evidenced by losses of what Hobfoll (1988, 1989, 1991) would refer to as conditions resources in his COR model. To reiterate, when an individual experiences one type of resource loss (i.e., conditions, objects, personal characteristics, or energies) this often results in loss or depletion of other types of resources (Hobfoll 1991). Conversely, resource gain in one area tends to produce gains in other areas. As Picou and Gill (1997) and Arata et al. (2000) demonstrate, the COR model is appropriate for studies of communities that have been affected by technological disasters. In the case of Cordova, a variety of elements seem to have converged to challenge the community. In some instances, it appears the community has been able to come together to meet these challenges (e.g., an avalanche or death of a resident); in other cases (arenas of economic challenges, commercial fishing market conditions, and

environmental recovery) it appears social capital may be so diminished that full recovery from the effects of the spill will not be possible. Again, if some outcomes of social capital are social cohesion, economic achievement, participation in civic activities, and more social capital, and if a community's social capital is already diminished, it will be difficult for that community in the wake of a technological disaster to advance.

## 2.6 Summary

The chronic nature of social and psychological impacts of technological disasters hinders replenishment of social capital. As Coleman (1990) views it, social capital – like human and physical capital – depreciates with time. “Social relationships die out if not maintained; expectations and obligations wither over time; and norms depend on regular communication” (Coleman 1990:321). In summary, recreancy, social disruption, chronic stress, coping strategies, lifestyle change, lifescape change, loss of ontological security, and various forms of resource loss associated with technological disasters do not provide an environment conducive to maintaining, renewing, or creating social capital.

Figure 2.3 depicts the overall theoretical approach for this research. The ecological-symbolic perspective and RRC concept provide a context for the model. RRC conceptualization embedded in the ecological-symbolic approach delineates how exchange relationships between natural, built, and social environments are disrupted in the wake of such an event.<sup>7</sup> RRCs such as Cordova, Alaska, are especially vulnerable to impacts of technological disasters.

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<sup>7</sup> As noted in the literature review, an ecological-symbolic approach is applicable not only RRCs, but to non-RRCs as well.

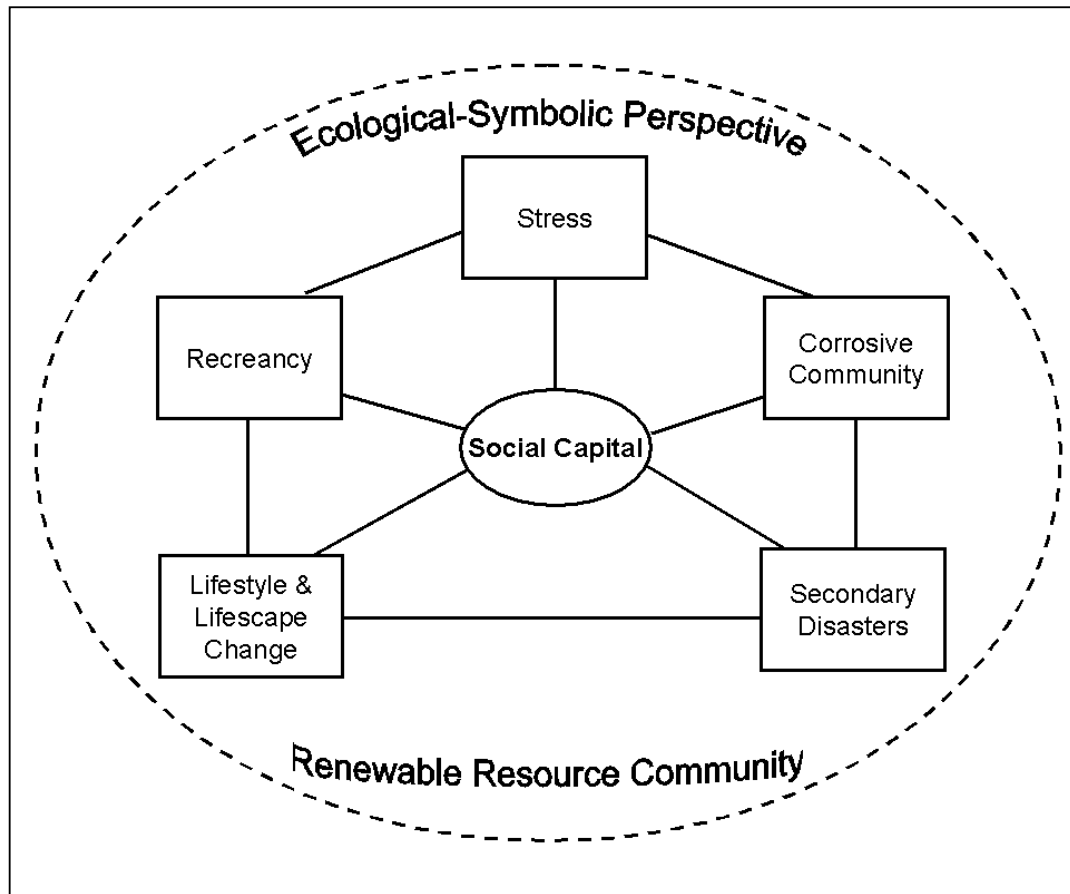


Figure 2.3 – Theoretical Framework: Social Capital and Technological Disaster Concepts

Social capital, at the center of the model, represents a common thread between each concept, perspective, and theory in the model relating to technological disasters. Each primary element of the model – recreancy; individual stress and collective trauma; corrosive community; lifestyle and lifescape; and secondary disasters – is couched throughout the remainder of this dissertation in terms of social capital. Lines in the model

represent connections among concepts in the context of the ecological-symbolic perspective and RRC concept.

## CHAPTER III

### METHODS

#### **3.1 Introduction**

This chapter presents the overall research design and philosophy framing my methodological approach. Following the discussion of my research design, I present a description of research methods including review and incorporation of existing quantitative data, participant observation, and the centerpiece of my work – in-depth personal interviews. The chapter concludes with a presentation of interview protocol, interview sample characteristics, and methods for analyzing interview data.

#### **3.2 Research Design**

This study is patterned after Maxwell's (1996) model of research design, reinforcing the "interactive" nature of various elements of research. Maxwell (1996) presents five components in his research design framework: (1) purposes, (2) conceptual context, (3) research questions, (4) methods, and (5) validity (See Figure 3.1). Although others (e.g., LeCompte and Preissle 1993; Miles and Huberman 1994; Robson 1993) have presented these elements of research design, Maxwell (1996) contends his model is unique in that it "does not begin from a fixed starting point or proceed through a

determinate sequence of steps, [but] it recognizes the importance of *interconnection and interaction among the different design components*” (p. 3, italics added).<sup>1</sup>

Maxwell’s (1996) model is presented in Figure 3.1, with each line representing aspects of the model having mutual influence.<sup>2</sup> Elements of the upper triangle of the model should be closely integrated, with a study’s purposes and conceptual framework being mutually influential, informative, and logically driving the research questions. Similarly, components of the bottom half of the model should be closely linked, with methods developed in consideration of research questions, as well as issues of validity.

As described by Maxwell (1996):

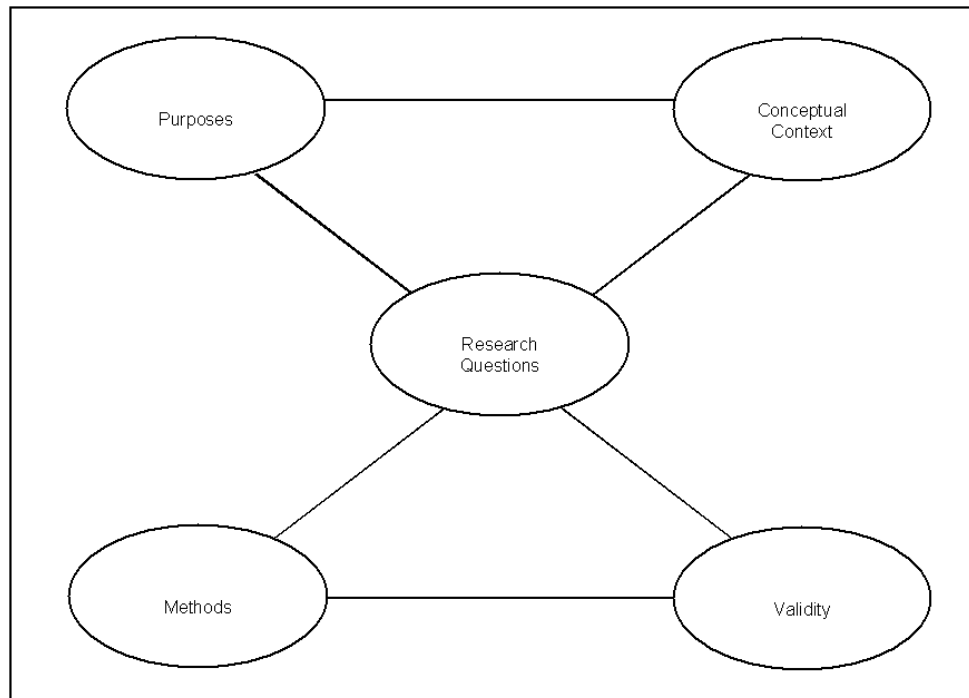
The top part of the model is the external aspect of the design; it includes the goals, experiences, knowledge, assumptions, and theory that you bring to the study and incorporate into the design. The bottom part is the external aspect; it includes the actual activities you will go through to develop and test your conclusions. The research questions are the center, or hub, of the model; they connect these two halves of the design and should inform, and be sensitive to, all of the other components.

The connections among the different components of the model are not rigid rules or fixed implications; they allow for a certain amount of give. I find it useful to think of them as rubber bands. They can stretch and bend to some extent, but they exert a definite tension on different parts of the design, and beyond a particular point, or under certain stresses, they will break. This metaphor represents a qualitative design as something with considerable flexibility, but in which the different parts impose constraints on each other, constraints that, if violated, make the design ineffective. (P. 6)

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<sup>1</sup> For an example of a stage model of research design, see Singleton, Straits, and Straits (1993).

<sup>2</sup> Maxwell notes there are additional connections, but has chosen to highlight those he considers most important.



\* Maxwell (1996 Figure 1.1:5).

Figure 3.1 – An Interactive Model of Research Design\*

Consistent with Maxwell's (1996) model of interactive research design, Chapter II presented the purpose, conceptual context, and research questions for this study. The following sections elaborate the conceptual context and describe methods for this research as well as issues of validity.



### 3.2.1 The Case for a Mixed-Method Approach in Exploring the Potential of Social Capital Theory in Technological Disaster Research

Tashakkori and Teddlie (1998) review the “paradigm wars” stemming from social scientific debates regarding positivist orientations versus constructivist approaches. Positivism is a philosophical stance that contends reality exists separate and apart from individuals’ interpretations of it. Positivism suggests human action can be causally explained using the same methods as those employed to study natural phenomena. Conversely, a constructivist approach maintains social reality is continually constructed and reconstructed through social interaction. Corresponding to positivist and constructivist paradigms are quantitative and qualitative methods, respectively.

Arguments “for” and “against” these approaches were manifested as quantitative-qualitative debates in the social sciences, particularly in the 1970s and 1980s (Tashakkori and Teddlie 1998). However, by the early 1990s, there was a “détente” in the paradigm wars as researchers acknowledged values of differing approaches (Tashakkori and Teddlie 1998). Since then, many social scientists “have adopted the tenets of a *paradigm relativism*, or the use of whatever philosophical and/or methodological approach works for the particular research problem under study” (Tashakkori and Teddlie 1998:5). As Frey (1983) notes, “the research design, including the data gathering phase, depends on the nature of the problem being studied, the nature of the population being researched, and the extent of the resources available” (pp. 33-4).<sup>3</sup> Tashakkori and Teddlie (1998) comment, the “best scholars have always been more interested in investigating the

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<sup>3</sup> It has been argued that researchers’ own beliefs about the nature of reality influence research design and are evident in types of studies they undertake.

questions they have posed than the specific methodologies that they employ and the paradigms that underlie these methods” (p. 22).

For litigation-related research and a majority of basic and applied studies, survey research techniques, including researcher-administered and clinician-administered instruments, self-administered surveys, and telephone surveys, have been effective and commonly used approaches to gathering quantitative data about disaster impacts (e.g., see Bolin 1988; Davidson et al. 1986; Erikson 1976a, 1976b; Gill and Picou 1991, 1998; Gleser, Green, and Winget 1981; Grace et al. 1993; Green 1982, 1991, 1993, 1996; Green et al. 1983, 1990a, 1990b; Green and Lindy 1994; Holen 1991; Peacock, Morrow, and Gladwin 1997; Peacock and Ragsdale 1997; Picou, Gill, and Cohen 1997; Picou et al. 1992; Picou and Rosebrook 1993; Weisath 1989). As with other lines of inquiry, survey research offers several advantages to researchers. Among these are cost effectiveness, relatively rapid data collection, and findings that may be generalized (Babbie 1990; Dillman 1978; Fowler 1993; Frey 1989).

Qualitative methods have also been effectively used in technological disaster research (e.g., Edelstein [1988] 2004; Erikson 1976a, 1994; Kroll-Smith and Couch 1990b). As defined by Creswell (1998):

Qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The research builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting. (P. 15)

There are several factors to consider when undertaking qualitative research. The first and most important is the type of research question(s) being posed. Qualitative

research questions usually begin with *how* or *what* and focus on *meanings, processes, and context* of events and activities (Creswell 1998; Maxwell 1996). In contrast, quantitative research asks *why, to what extent, and how much*, with the intent of measuring variance or correlation to establish an association, relationship, or cause and effect between variables (Creswell 1998; Maxwell 1996). This capacity of quantitative research reinforces its use in technological disaster litigation research. Second, Creswell (1998) suggests employing qualitative methods to *explore* a topic, particularly when theories need to be developed. Erikson's (1976a, 1976b) discussion of collective trauma, which derived from his work on the Buffalo Creek disaster, demonstrates this aspect of qualitative research. Third, qualitative studies may be used to examine a topic in more *detail* than afforded by quantitative approaches. Fourth, qualitative studies enable a researcher to study a topic in *context*, in a natural setting where human interaction takes place. Fifth, qualitative work affords a researcher an opportunity to "write in a literary style... [bringing] himself or herself into the study" (Creswell 1998:18). Sixth, qualitative studies should be undertaken only when there is *sufficient time and resources* to do so. Seventh, a qualitative approach is best used when *audiences* are likely to be receptive to qualitative research. To this I would add, the *target population* should be considered when considering the use of qualitative methodologies. Finally, Creswell (1998) advocates a qualitative approach "to emphasize the researcher's role as an *active learner* who can tell the story from the participants' view rather than an 'expert' who passes judgment on participants" (p. 18, italics in the original).

This study offers an alternate but complementary approach to previous and ongoing quantitative research examining community responses to technological disasters. Given the questions posed in this research, a mixed-method approach combining quantitative and qualitative methods is appropriate. Extant quantitative data collected by Gill and Picou between 1989 and 2001 address the *Exxon Valdez* oil spill (EVOS) aftermath by providing “hard evidence” highlighting impacts of this technological disaster on various forms of social capital; primary qualitative research conducted in 2002-2003 examines how Cordovans view and interpret impacts of EVOS on their community’s social capital. Together, these data highlight elements of social capital and how it is changed by an event such as the EVOS. This dissertation combines an analysis of primary qualitative data generated through transcribed in-depth, semi-structured personal interviews and participant-observation with a descriptive analysis of extant quantitative data. Collectively, these methodologies offer a broad spectrum of insights into social and psychological impacts of technological disasters. More specifically, they address the potential of social capital theory for use in technological disaster research.

### 3.2.2 Integrating Social Constructionism and a Narrative Constructivist Perspective: A Methodological Philosophy

The research questions addressing social capital, social impacts of disasters, disaster-related stress, and perceptions of risk call for a combination of qualitative methodologies and quantitative measures. The questions also require conceptually integrating and applying a “contextual social constructionist” framework in concert with

a “narrative constructivist” perspective to bridge micro- and macro-level interpretations of the EVOS. Broadly speaking, in sociological literature, social constructionists contend the interaction processes people employ to define their worlds are more important than conclusions at which they arrive. Contextual social constructionists espouse a perspective embedding interpretation processes in “hard evidence” (e.g., statistics), placing analysis of how people interpret and construct reality within an historical, cultural, structural, or experiential context. They are interested in discrepancies between what members say and believe, and what is “objectively known” about a given situation. From the field of psychology, a narrative constructivist perspective offers the following:

[T]he human mind is a product of the personal meanings that individuals create. Individuals do not merely respond to events . . . they respond to their interpretation of these events and to their perceived implications of these events. How individuals create such meanings and realities, how they construct their world view, is the subject of narrative psychology (Meichenbaum and Fitzpatrick 1993:707).

In contrast with social constructionism, this approach is a micro-level examination of human actions. The following sections provide a brief overview of social constructionism and narrative constructivism, concluding with a discussion of how the two perspectives are conceptually integrated in this study.

### *3.2.2.1 Origins of Social Constructionism*

The term “social construction” originates with Berger and Luckmann’s *The Social Construction of Reality* (1966), the theoretical birthplace of the perspective. Berger and Luckmann (1966) contend reality is socially constructed through actions and interactions of individuals and groups. These creations and recreations of reality become

institutionalized in society. In the case of the *Exxon Valdez* oil spill, the media, Exxon, federal and state agencies, area residents, commercial fishermen, Alaska Natives, and environmental groups, among others, constructed their realities in unique though sometimes overlapping ways. Considering ways Cordovans have interpreted their social realities in the years since 1989 offers an opportunity to understand community dynamics, especially how technological disasters are associated with social capital in renewable resource communities.

The intellectual lineage of social constructionism can be traced to “phenomenology” and “symbolic interactionism.” Edmund Husserl (1859-1938) coined the term phenomenology as “interest in those things that can be directly apprehended by one’s senses” (Wallace and Wolf 1998:291). Through phenomenology, Alfred Schutz (1899-1959) offered sociologists an opportunity to introduce individuals’ perceptions and definitions of a given situation into their field of study, incorporating Weber’s notion of *verstehen* or subjective understanding.<sup>4</sup> He further expounded this approach, explaining how people draw from a “common stock of knowledge” that suggests to individuals their use of categories and “ideal types” in describing what they see. This common stock of knowledge is passed along from social group to social group over time as “typifications.” It was Schutz who first encouraged an examination of the “taken-for-granted world” and an avoidance of prior assumptions.

Social constructionism’s symbolic interactionist roots are located in Cooley’s (1909) social-psychological conceptualization of the “looking-glass self.” This posits that

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<sup>4</sup> Schutz, a German social philosopher, introduced phenomenology to the United States in the 1940s through his work at The New School for Social Research in New York (Orleans 1991). Phenomenology found increasing though limited support among American sociologists beginning in the 1960s.

society is constructed through reciprocal interaction; just as individuals see themselves in a mirror, they also use gestures of others to see themselves. Responses to individuals' behavior indicate appropriateness or inappropriateness of actions. Establishment of a stable sense of self emerges over time with continued glances in the looking-glass. How individuals see themselves – that is, how they think others see them – plays an important part in reality construction since in this conceptualization individuals are objects in the field of reality.<sup>5</sup>

Finally, the Thomas Theorem (Thomas and Thomas 1923), which proposes that if a situation is perceived to be real, it will be real in its consequences, is another underpinning of social constructionism. This definitional approach to situations states, “Preliminary to any self-determined act of behavior there is always a . . . *definition of the situation* . . . gradually a whole life-policy and the personality of the individual himself follow from a series of such definitions” (Thomas and Thomas 1923:42, italics in the original).

Drawing on phenomenology, as well as symbolic interaction, Berger and Luckmann (1966) contribute to knowledge about how realities are created and recreated through social construction. Theirs is a macro perspective because it focuses “on the broad-scale process of reality construction” (Orleans 1991:168). Berger (1969) provides a concise definition of social constructionism:

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<sup>5</sup> The social-psychological tradition of Mead (1934) offers additional insights for social constructionism. In Mead's analysis, the “self” is comprised of the “I” and the “me.” The “I” is the unpredictable, primitive, acting part of the self; the “me” is the part of the self that is learned and has the capacity to filter stimuli before the “I” acts. The “generalized other” is society's representation of the individual. The self is constructed through social processes, and it is through interaction that individuals begin to see themselves as objects in the field of action. The meaning of the self as an object is derived from how others respond to the individual – much like Cooley's looking-glass self.

Worlds are socially constructed and socially maintained. Their continuing reality, both objective (as common, taken-for-granted facticity) and subjective (as facticity imposing itself on individual consciousness), depends on specific social processes, namely those processes that ongoingly reconstruct and maintain the particular worlds in question. (P. 45)

Berger and Luckmann are primarily concerned with how subjective meanings evolve into “objective facts.” One danger associated with this evolution is the possibility for reification, “the apprehension of the products of human activity *as if* they were something else than human products – such as facts of nature, results of cosmic laws, or manifestations of divine will” (Wallace and Wolf 1998:317, italics in the original). Berger and Luckmann caution against reification of roles, norms, and institutions, noting that individuals and groups are authors of reality and that roles, norms, and institutions can all become reified.

Since Berger and Luckmann introduced the term “social constructionism” in the mid-1960s, numerous scholars have offered interpretations and reinterpretations of this approach for inclusion in a growing body of literature on the subject. These range from what may be referred to as more theoretical contributions such as those of Mauss (1975), Spector and Kitsuse ([1977] 2001), Best (1989,1993), Woolgar and Pawluch (1985), Schneider (1985), Ibarra and Kitsuse (1993), Miller and Holstein (1993), and Schwandt (2000), to the more applied offerings of Latour and Woolgar (1979), Gusfield (1981), Knorr-Cetina and Mulkay (1983), Knorr-Cetina (1983), and Hannigan (1995).<sup>6</sup>

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<sup>6</sup> By referring to certain contributions as theoretical, my intent is not to imply that these authors do not also apply their work. Rather, their work lends to the very foundations of social constructionism and the work of others builds on their efforts.



### 3.2.2.2 *Applying Social Constructionism*

Miller and Holstein suggest, “The social constructionist perspective has been the most controversial – if not the most influential – development in social problems theory in the past twenty-five years” (1993:5).<sup>7</sup> Woolgar and Pawluch (1985) critique social constructionism, referring to the approach as “ontological gerrymandering.” Placing subjectivist, constructionist, constructivist, and perceptionist approaches under the umbrella of a “definitional” perspective, their work addresses ways definitional explanations of social problems manipulate the boundaries between phenomena, “making certain phenomena problematic while leaving others unproblematic” (Woolgar and Pawluch 1985:214). Arguments presented in most social constructionist approaches “imply that since the condition does not vary, variations in the definition of the condition must result from the social circumstances of the definers rather than from the condition itself” (Woolgar and Pawluch 1985:215).<sup>8</sup> Although their critique exudes a cautionary tone, it “is *not* a call for a return to the study of social problems in the style opposed by the definitionalists” (Woolgar and Pawluch 1985:224, italics added). Ontological gerrymandering provides a practical way to manage tensions between “objective facts” and individuals’ or groups’ representations of them. Identified inconsistencies in social constructionism are inherent in all attempts to explain social phenomena.

Miller and Holstein (1993) suggest that Best (1989) and Gusfield (1985) successfully counter Woolgar and Pawluch’s (1985) ontological gerrymandering critique

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<sup>7</sup> For more extensive discussions of social constructionism relating to social problems see Best (1989); Mauss (1975); Schneider (1985); Solesbury (1976); Spector and Kitsuse (1973; [1977] 2001).

<sup>8</sup> Woolgar and Pawluch cite Spector and Kitsuse (1977), Gusfield (1981), and Conrad and Schneider (1980) to demonstrate that ontological gerrymandering is the primary strategy used to negotiate these boundaries.

by framing their theoretical development and research efforts using a “contextual” constructionist perspective. This term, introduced by Best (1989), distinguishes between “strict social constructionism” and “contextual social constructionism.”<sup>9</sup> Strict social constructionists are concerned with how people interpret and practice reality construction; their primary focus is on theoretical processes of interpretation. “The strict constructionist is not interested in assessing or judging the truth, accuracy, credibility, or reasonableness of what members say and do” (Kitsuse and Schneider 1989:xiii). Strict social constructionists, such as Spector and Kitsuse ([1977] 2001) forgo contextualization, choosing not to contaminate their analysis of social problems by introducing the notion of objective conditions.<sup>10</sup> Criticizing this theoretical stance, Best (1989) states:

It is difficult to miss the irony in the strict constructionist perspective. Constructionist theorists have always insisted that their theory is empirically based, but strict constructionism demands that analysts avoid references to the empirical world in order to maintain the theory’s epistemological integrity. (P. 138)

On the other hand, as previously mentioned, contextual social constructionists juxtapose interpretation processes with “objective,” empirical measures such as quantitative data.

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<sup>9</sup> Distinctions between “strict social constructionism” and “contextual social constructionism” did not emerge until more than a decade after Spector and Kitsuse’s original work (1977).

<sup>10</sup> Spector and Kitsuse’s 2001 work was originally published in 1977 by The Benjamin/Cummings Publishing Company as part of the Cummings Series in Contemporary Sociology. The substantive difference in the recent edition is a new introduction by Kitsuse.

Strict and contextual social constructionism are also referred to as “strong” and “weak” social constructionism, respectively (e.g., Lupton 1999; Schwandt 2000).<sup>11</sup> Schwandt’s (2000) version of weak social constructionism considers contextual and background assumptions, particularly sociocultural factors. To clarify, he cites Giddens (1993), who states, “it is only within reference to a particular form of life that the meaning of an action can be described and deciphered” (in Schwandt 2000:200). Schwandt refers to constructionism that does not consider context as strong social constructionism, which is similar to Best’s (1989) strict social constructionism. In other words, it is not possible to compare meanings from one context to another, one culture to another, one time period to another, or one language to another. This perspective reduces everything to the eye of the beholder. In this sense, Schwandt (2000) considers a strong constructionist viewpoint as problematic because if nothing is comparable, why do we endeavor to undertake comparisons? Similarly, Best (1993) suggests that social scientists consider the following question: “Isn’t it time for constructionists to worry a little less about how we know what we know, and worry a little more about what, if anything, we know about the construction of social problems?” (p. 144).

Ongoing debates between strict and contextual social constructionist camps result in very different intellectual pursuits, processes, and products. Distinguishing between strict and contextual social constructionism is critical in applying a social constructionist approach, particularly when types of research best suited to this perspective are considered. Most work applying a social constructionist perspective falls within a

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<sup>11</sup> Best (1993) addresses “weak” versus “strong” readings of Spector and Kitsuse’s ([1977] 2001) work. According to Best (1993), Spector and Kitsuse prefer a strong reading of their work (i.e., a reading that follows and applies a strict social constructionist perspective).

contextual realm because a strict constructivist stance does not lend itself to many types of sociological analyses (Best 1993; also see Gusfield 1981; Hannigan 1995; Knorr-Cetina 1983; Knorr-Cetina and Mulkay 1983; Latour and Woolgar 1979).<sup>12</sup> From Best's contextual constructionist position, "we will understand the empirical world better if we pay attention to the manner in which social problems emerge and . . . understanding the empirical world is desirable" (1993:139). According to Best (1993), "Even when analysts retreat from any discussion of empirical cases, epistemologically consistent strict constructionist analysis seems to be an unachievable goal" (p. 143).<sup>13</sup>

For objectivists, social problems are "conditions;" for social constructionists, social problems are "claims-making" activities (see Schneider 1985). Claims-making is "an act of communication" (Best 1989:1), a rhetorical activity, the objective of which is to persuade. Viewing social problems as claims-making activities contributes to sociological theory. However, social constructionism is not only valuable as a theoretical tool, but as an analytical tool, as well. Objectivist definitions of social problems, such as, "trouble spots within society – social arrangements that do not work properly," are of limited use because they do not increase understanding of social problems as a larger issue (Best 1989:xv). First, such definitions do not take into account the subjective nature

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<sup>12</sup> Invoking reflexive writing offers one way to counter criticisms of a strict social constructionist approach. Becker (1963) and Garfinkel (1967) demonstrate how an ethnomethodological approach can aid in understanding how people assign meaning to what goes on in the world. Combined with reflexive thinking, methods of conversational analysis and mass-media studies can contribute to and enhance the aforementioned approach.

<sup>13</sup> Best (1989, 1993) has played an important role in articulating ways social problems are socially constructed. An advocate of a contextual social constructionist perspective, Best maintains "contextual constructionists treat this professional obligation [of monitoring the validity of claims and definitions made by members of a society] as part of the research activity," while strict social constructionists contend sociologists should not be making judgments about members' interpretations of their situations (cited by Kitsuse and Schneider 1989:xi; also see Schneider 1985).

of social problems. Best contends, “Social problems are what people view as social problems” (1989:xvi). This is reminiscent of the Thomas Theorem. Second, “The objective conditions that people define as social problems have relatively little in common” (Best 1989:xvii). By studying social problems as claims-making activities, sociologists have opportunities to focus on processes associated with defining social problems, using social constructionism as an analytical tool and thereby highlighting what social problems share in common.

Social constructionism is also referred to as perspectivism, “the view that all knowledge claims and their evaluation take place within a conceptual framework through which the world is described and explained” (Schwandt 2000:197). As such, the construction of meaning is not a one-time venture, but an ongoing process during which historical and cultural influences weave their way through definitions of reality. Reality creation does not take place in a vacuum independent of past and current experiences. Once again, this description of social constructionism reinforces a post-positivistic epistemological stance. In this light, social capital is socially constructed, reflecting experiences of groups and communities.

The following section describes a narrative constructivist perspective, borrowed from the discipline of psychology. As will be discussed, employing a narrative constructivist perspective affords social scientists opportunities to learn more about how micro-level activity becomes macro-level, collective activity through contextual social constructionism. From this standpoint, narrative constructionism provides social scientists another theoretical and methodological tool for their analytical tool kit.

### 3.2.2.3 *Narrative Constructivism*

A narrative constructivist conceptualization of the creation of meaning parallels previously discussed sociological approaches of phenomenology, symbolic interactionism, and social constructionism with the major difference being a focus on the individual.<sup>14</sup> “Narrative psychology is the study of the stories we tell about ourselves to others, as well as to ourselves” (Meichenbaum and Fitzpatrick 1993:707). Seeking to explain individual differences in responses to traumatic stress, Meichenbaum and Fitzpatrick (1993) offer narrative constructivism as a psychological approach to understanding how individuals process stress and stressful situations such as the aftermath of technological disasters.

Building on Sarbin’s (1986) earlier work in narrative psychology, as well as the efforts of Robinson and Hawpe (1986), Meichenbaum and Fitzpatrick (1993) argue narrative analysis offers an opportunity to link individual interpretations of events to more general, societal interpretations. At an individual level, narration facilitates survival by providing a way to organize episodes, actions, and accounts of actions (Sarbin 1986). “Where there are no firm connections between empirical events, the individual organizes them into an imaginative formulation that meets one or more tests of coherence” (Sarbin 1986:12). Similarly, social construction of reality relies on individuals sharing products of these organizational processes; then, through social interaction, this organizational scheme is interpreted and fine-tuned. As Robinson and Hawpe (1986) state:

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<sup>14</sup> Rather than finding its philosophical roots in the sociological writings of Schutz, Husserl, Mead, Berger and Luckmann, and Garfinkel, the psychological constructivist perspective draws upon the works of Wilhelm Wundt, Alfred Adler, George Kelly, Jean Piaget, Viktor Frankl, and Jerome Frank (Meichenbaum and Fitzpatrick 1993).

Because we live in groups, we need ways of understanding the actions of others. This requires a cognitive analysis of action in its *social context*. The categories and relations which comprise narratives are the distillation of such an analysis and represent the properties of social action that are most useful in explaining everyday experience. In effect, narratives are a solution to a fundamental problem in life, viz., creating understandable order in human affairs. (P. 112, italics added)

At a group or community level, creating this order may be seen as social construction of reality. Moreover, social capital is a way of framing order, through trust and associations.

According to empirical research, what individuals tell themselves about experiences affects their adaptation to stressful events (e.g., see Baum, O'Keefe, and Davidson 1990). An advantage of a narrative constructivist perspective for use in technological disaster research is the notion of "narrative repair" (Meichenbaum and Fitzpatrick 1993). When exposed to traumatic or stressful events, individuals engage in narrative repair to adjust to new situations (Shafer 1992). For example, based in part on research of residents living near Three-Mile Island, there is evidence that people who avoid blaming others and who assume some personal responsibility for their misfortune are more likely to psychologically adjust to their new circumstances (Baum, O'Keefe, and Davidson 1990). This apparently is connected to perceived control over one's situation.

Because stressful events involving literal loss (e.g., a loved one, a relationship, a home) and symbolic loss (e.g., plans for the future, hopes for goal attainment) tend to challenge basic beliefs, individuals and groups must adapt psychologically. Arguably, *threat* of loss as described by Hobfoll (1988, 1989, 1991) also requires adaptation through psychological and social coping strategies and behaviors. Individuals who

experience continued uncontrolled intrusive thoughts or images tend also to have higher levels of chronic stress (Baum 1990). Departing from Baum's (1990) explanation, Meichenbaum and Fitzpatrick (1993) suggest that from a narrative constructivist perspective, "Intrusive imagery can be viewed as an attempt by an individual to make sense of or to construct meaning about a stressful event or to formulate a narrative account of what happened and why" (p. 709). Using social comparison processes – adaptive narratives convincing individuals their situations could be worse – is another constructivist approach. Each of these concepts has bearing on quantitative and qualitative research as sociologists attempt to understand collective stress resulting from technological and natural disasters. Thus, a narrative constructivist approach has implications for applied sociological research and theory development, particularly with respect to technological disasters and their effects on social capital.

### 3.2.3 Conceptually Integrating Social Constructionism and Narrative Constructivism

Parallels between narrative constructionism and social constructionism are apparent. A challenge, however, is integrating these micro- and macro-level perspectives to enhance our understanding of relationships between social and psychological impacts of technological disasters and social capital. At a micro level, narrative constructivism contributes to our understanding of how *individuals* organize and communicate events; a social constructionist perspective examines how *groups of people* organize and communicate events at a macro level. Integrating these perspectives demonstrates how social reality is continually constructed and reconstructed by individuals and groups of



individuals, including communities. Applied, this theoretical approach provides a useful methodological framework to explore how Cordovans “made sense of” and assigned meaning to the *EVOS*; community reactions to the spill; ecological degradation and recovery associated with the spill; subsequent, ongoing litigation; and impacts of these on social capital in Cordova. Qualitative data presented in this dissertation offer insights into fundamental beliefs of individuals and how these are related to perceptions of community level belief systems. Integrating an interpretation of these data with quantitative data affords an opportunity to link micro-level beliefs with macro-level belief systems appropriate for sociological inquiry.

#### 3.2.4 Studying the Potential of Social Capital Theory in Technological Disaster

##### Research: The Case for a Constructivist Approach

An integrated philosophical and methodological approach combining contextual social constructionism with a narrative constructivist perspective is well suited to addressing issues associated with social capital.<sup>15</sup> Because social capital is a dynamic, relational phenomenon, it requires examination from a variety of perspectives “in ways that at least attempt to capture the changing nature of relationships. Such relationships cannot be captured in any single line of analysis” (Schuller, Baron, and Field 2000:29). Although Schuller, Baron, and Field (2000) do not espouse a post-modernist, unqualified relativist approach, their perspective fits within a contextual constructionist perspective.

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<sup>15</sup> From this point forward in this dissertation, unless otherwise specified, use of the terms “contextual social constructionism” and “constructionism” implies a narrative constructivist perspective.

A review of literature identifies several broad measurement issues associated with studying social capital. As Fine and Green (2000) state, “The search is now on for the holy grail: a consistent measurement instrument that can be applied without major adaptation across a range of situations, for both research and for policy purposes” (p. 90).

Putnam (2000) comments on general challenges of measuring social capital:

It would obviously be valuable to have distinct measures of . . . social capital over time. However, like researchers on global warming, we must make do with the imperfect evidence that we can find, not merely lament its deficiencies. Exhaustive descriptions of social networks in America – even at a single point in time – do not exist. I have found no reliable, comprehensive, nationwide measures of social capital that neatly distinguish ‘bridgingness’ and ‘bondingness.’ (Pp. 23-4)

More specifically, Schuller, Baron, and Field (2000) note, “social capital is a prime example where social scientists deploy techniques that the quality or quantity of the data available cannot sustain” (p. 27). They state:

We need a ‘methodological deflator’ which will present readers with assessments of the relationship between the precision of the results and the validity of the measures. *More generally, we make the conventional, but nonetheless crucial, plea for an appropriate mixture of quantitative and qualitative approaches.* A particular example is the measurement of associational life. Grossing up the numbers of organizations to which people belong tells us very little about the strength of social capital if it is not accompanied by information on two scores: what people actually do as members of an association, and how far this relates to public as well as private goods.

We suggest that the value of social capital as a concept is not best served by pinning it tightly to the latest quantitative modeling techniques. We are at a stage in development of the term where on balance more work needs to be done on the *validity* of the measures to be used than on putatively precise analysis. Both are necessary but we stress the question of balance and self-awareness. (Schuller, Baron, and Field 2000:27, italics added to the first paragraph; in the second paragraph, italics in the original.)

This dissertation addresses, in part, pleas of Schuller, Baron, and Field (2000) and others (e.g., see Campbell 2000; Paxton 1999) to combine quantitative and qualitative approaches to understanding social capital.

### 3.2.5 Summary of Research Design

A theoretical and methodological premise that reality construction is an ongoing, interactive process leads to a greater understanding of social and psychological impacts associated with technological disasters, particularly in relation to social capital. Studies of technological disasters have shown that because there is no clear, collective definition of scope and risks associated with biospheric contamination, individuals are forced to create their own definitions (Edelstein [1988] 2004; Gill and Picou 1998; Kroll-Smith and Couch 1990b, 1993b; also see Erikson 1994; Fowlkes and Miller 1982; Levine 1982). Because individuals and groups conceptualize circumstances from a variety of perspectives, a research design based on “crystallization” is appropriate (Richardson 1994). As described by Richardson (1994), a crystal “combines symmetry and substance with an infinite variety of shapes, substances, transmutations, multidimensionalities, and angle of approach. Crystals grow, change, and alter, but are not amorphous” (p. 522). Like crystals, social impacts of EVOS and other technological disasters are not “amorphous;” empirical quantitative data demonstrate numerous forms and manifestations of these impacts. However, as Janesick (2000) notes, “what we see when we look through a crystal . . . depends on how we view it, how we hold it up to the light or not” (p. 392). Qualitative data collected in 2002-2003 afford a new way of holding

social impacts of the EVOS “up to the light,” concurrently employing narrative constructivist and social constructionism approaches. Introducing social capital to the research design as a theoretical lens provides a different way of “viewing” these impacts.

The research design for this study is presented in Figure 3.2, based on Maxwell’s (1996) interactive model. This figure presents the purpose, conceptual context, research questions, methods, and strategies to enhance validity associated with my research. Social capital theory, disaster research, and constructionism represent the conceptual context for this study. The concept of a renewable resource community (Gill 1994; Gill and Picou 1997, 2001; Picou and Gill 1997), embedded in the ecological-symbolic perspective (Kroll-Smith and Couch 1991a, 1991b, 1993a, 1993b), further contextualizes the research findings as I explore the potential for social capital theory in disaster research. The research questions provide a framework for analyzing and interpreting the qualitative data and incorporating descriptive quantitative data, focusing on relationships between social capital and each of the following: recreancy (Freudenburg 1993, 2000); stress reactions, coping, and collective trauma (Edelstein [1988] 2004, 2000; Erikson 1976a, 1976b, 1991, 1994; Hobfoll 1988, 1989, 1991); aspects of the corrosive community (Freudenburg and Jones 1991; Kroll-Smith and Couch 1991b, 1993a, 1993b); lifestyle change and lifescape change (Edelstein [1988] 2004, 2000; Giddens 1990) and secondary disasters including protracted litigation (Erikson 1976a, 1976b; Picou, Marshall, and Gill 2004).

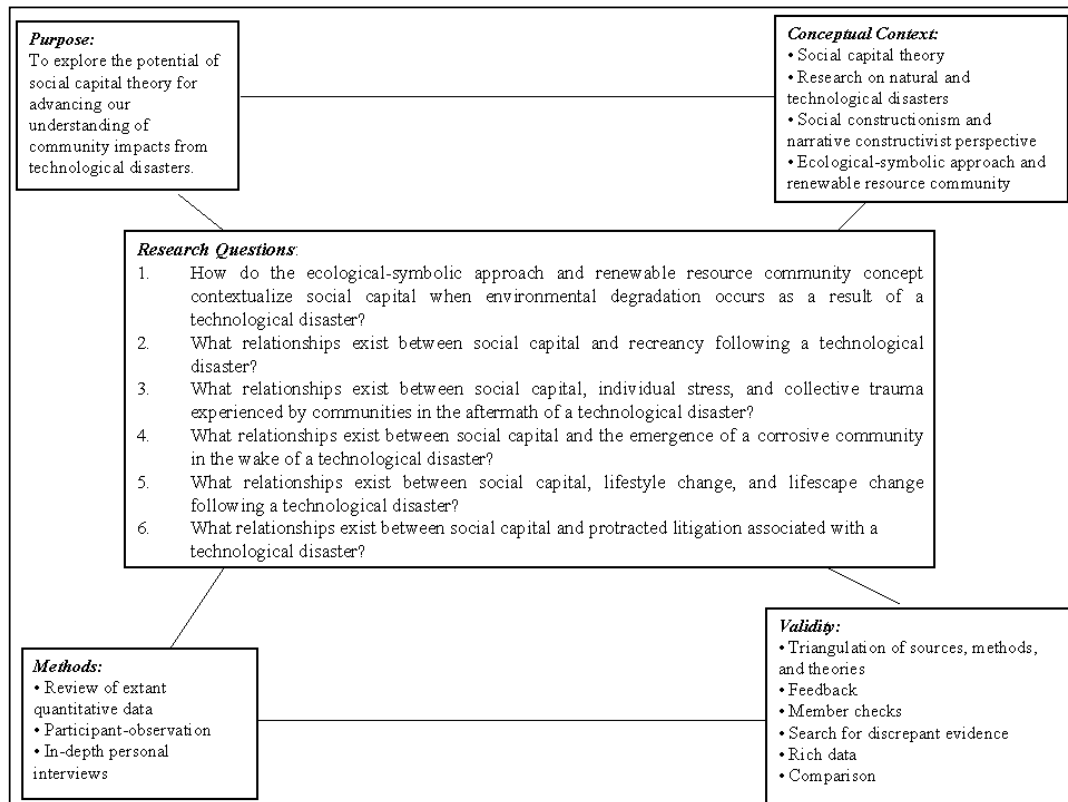


Figure 3.2 - Research Design for Exploring the Potential of Social Capital Theory in Technological Disaster Research

To address my research questions I use participant-observation, structured in-depth personal interviews, and existing quantitative data. The combination of these methods enhances our knowledge and understanding of how social disruption accompanying a technological disaster affects two primary forms of social capital: trust and associations. As discussed earlier, this mixed-method approach affords a unique opportunity to examine effects of a technological disaster on social capital in a renewable resource community. The approach also serves as a strategy to reduce threats to validity

in the study.<sup>16</sup> Additional strategies are presented in the lower right corner of Figure 3.2: triangulation of sources and theories; feedback from others (including researchers familiar with the Cordova community, as well as those who are not); member checks – soliciting feedback about data and conclusions from Cordovans (see Maxwell 1996); search for and inclusion of discrepant evidence; inclusion of “rich” data (i.e., data that are detailed and complete enough to provide a comprehensive view);<sup>17</sup> and comparison (of quantitative data). Maxwell (1996) refers to these strategies as “tests” of validity, noting “they primarily operate not by *verifying* conclusions, but by *testing* the validity of your conclusions and the existence of potential threats to those conclusions” (p. 92, italics in the original).

### 3.3 Research Methods

#### 3.3.1 Incorporation of Quantitative Data

EVOS data collected between 1989 and 2001 highlight various aspects of social capital in Cordova.<sup>18</sup> Using a variety of methods, including face-to-face interviews as well as telephone and mail surveys, quantitative data were collected in Cordova, Valdez, and a control community of Petersburg, Alaska. Although instruments for this data collection were not developed with social capital in mind, several items are similar to

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<sup>16</sup> There are three general types of validity in qualitative research: description, interpretation, and theory (Maxwell 1996).

<sup>17</sup> According to Maxwell (1996), interview based studies accomplish this through recording and transcribing interviews verbatim; observations require extensive note taking about events.

<sup>18</sup> See Appendix A for quantitative data collection methods.

measures employed in social capital research. A number of them speak to issues associated with social capital including perceptions of community, social disruption, psychological stress, trust, resource loss, social recovery from the spill, and EVOS-related litigation (e.g., see Arata et al. 2000; Gill 1994; Gill and Picou 1997, 1998; Picou and Arata 1997; Picou and Gill 1997; Picou, Gill, and Cohen 1997; Picou, Marshall, and Gill 2004; Picou et al. 1992; Picou et al. 2001). These quantitative data illuminate my qualitative data and highlight various aspects of social capital in Cordova.

### 3.3.2 Participant-Observation

My first visit to Cordova was in May 2001 when I participated in quantitative data collection with Drs. Duane A. Gill and J. Steven Picou for their National Science Foundation research grants to study community impacts of EVOS litigation. Although I did not realize it at the time, the participant-observation component of my research began then, as I met key community leaders and was introduced to the community of Cordova (and they to me). As Fetterman (1989) suggests, when conducting field research it is advantageous to have a facilitator who has credibility with the group one is interested in studying. Indeed, I benefited from 14 years of fieldwork conducted by Gill and Picou, who served as facilitators in making initial contact with a number of key actors in Cordova.<sup>19</sup> Again, according to Fetterman (1989):

The trust the group places in the [facilitator(s)] will approximate the trust it extends to the [researcher] at the beginning of the study. [Researchers] thus benefit from a halo effect if they are introduced by the right person:

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<sup>19</sup> Fetterman (1989) advocates using the term “key actor” rather than “key informant” to avoid negative connotations associated with the word “informant.”

Group members will give the researcher the benefit of the doubt, sight unseen.... A strong recommendation and introduction strengthen the fieldworker's capacity to work in a community and thus improve the quality of the data.<sup>20</sup> (P. 44)

During that first trip to Cordova, with entrée provided by Drs. Gill and Picou, I was welcomed into homes of several members of the community. I also began to learn the social and physical landscapes of Cordova – who drove which vehicles, on which float and slip in the harbor individuals' boats were docked, the best place for breakfast, hours the grocery store was open, which restaurant served the best halibut fish and chips, how to find the “Pro Shop,” what time “Wine on Wednesday” started each week at the Alaskan Bar, who to contact to ask questions about community events, what to wear so as not to get drenched on rainy days or stand out as an obvious outsider, and where to find the trailheads to Crater Lake and Haystack. It was on that visit I first heard language of an Alaskan fishing community – bowpicker, seiner, tender, gillnet, opener, escapement, corked, just to name a few. I learned that weather such as hurricanes and tropical storms that are given names in the Lower 48 are commonplace in Cordova, but are referred to as “blowing.” I also heard about different kinds of salmon and when they “run,” though I still have to carefully think about the order of the runs. This is not to say that I always understand what I am hearing, but the words have become more familiar and their meanings increasingly clear during subsequent trips and phone conversations as gracious and patient Cordovans answer my questions.

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<sup>20</sup> For the most part I believe I benefited from my association with previous and ongoing EVOS research. However, there were circumstances in which I believe this association may have been a drawback, which I discuss in Chapter VII of this dissertation.



During the May 2001 fieldwork, Drs. Picou and Gill and I discussed the possibility of my dissertation research providing qualitative follow-up to their work in Cordova. No concrete plans were developed, but during subsequent months I reviewed their research methods, data, and articles, exploring options for pursuing my own lines of inquiry. I also delved into literature on technological disasters, stress, and risk to further enhance my knowledge of the area. By August 2002 I had developed and defended a research proposal, providing the basis for the work presented in this dissertation. My formal dissertation research took place between August and November 2002, in January and February 2003, and in May 2003.<sup>21</sup> Combined with my initial trip in 2001, I spent a total of approximately eleven weeks in Cordova.

Ultimately, the participant-observation component of my research served four broad purposes. First, it enabled me to learn the language, social landscape, and geographical landscape of the Cordova community so that I might ask better questions and appropriately discuss issues associated with my research. For example, knowing geographic locations of different fishing grounds proved important as individuals described changes in their lifestyles following the EVOS. Similarly, knowing about different types of commercial fishing (e.g., seining versus gillnetting) and subsistence activities in Cordova helped me better understand economic and social impacts of the EVOS.

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<sup>21</sup> The dates of my formal fieldwork were August 28-September 19, 2002; October 29-November 17, 2002; January 29-February 12, 2003; and May 1-19, 2003. Dr. Picou was in Cordova for several days in September 2002. Dr. Gill was on site for a total of approximately two weeks in October-November 2002 and an additional week in January-February 2003. My husband, Jay Ritchie, spent about a week in Cordova with me in September 2002 and again in May 2003.

Second, participant-observation allowed me to contextualize my interview findings and presentation of quantitative data. Having participated in commercial fishing, even briefly, gave me a better understanding of why individuals I interviewed enjoy their lifestyle, as well as challenges associated with fishing. “Knowing” that most Cordovans participate in subsistence activities based on quantitative data is very different from having experienced subsistence activities first-hand. That is, my own participation helped me understand aspects of social capital associated with subsistence.

Third, my experiences in the community provided opportunities to validate qualitative interview data by observing specific instances of activities or situations described during interviews. Narratives offered accounts of community activities such as the annual Iceworm Festival and local fundraisers; however, personal observations enhanced my understanding of how these are conducted in Cordova.

Finally, though not an intended outcome of my participant-observation activities, my involvement afforded me access to arenas of the Cordova community that I might not have otherwise been fortunate enough to experience. This last consequence of my participant-observation was, I believe, the most important for my research. In particular, by being actively involved with community events and being seen in the community – as described in the pages that follow – I developed my own credibility over a period of weeks and months. People who initially seemed disinterested in my research – individuals who had indicated to me they saw little value in social science research – became involved either formally or informally with my study as I moved throughout the community. Thus, I learned about perspectives of perceived social impacts of the EVOS

(or lack thereof) from individuals who, for a variety of reasons, had not been involved with previous EVOS research. In this light, the value of my participant-observation activities extended well beyond what I thought would be opportunities to learn about Cordova by affording Cordovans opportunities to get to know me. In turn, the rapport I developed with different segments of the community helped me to garner a level of trust, enhancing my formal and informal data collection.

To see me arriving in Cordova in August 2002, one might have thought I was permanently moving there. I had three large bags consisting of too many clothes, non-perishable snacks, and supplies I thought would either not be available in Cordova or that purchasing them there would be too expensive. Despite the fact that I had already been to Cordova once, I really had not expected to be back in this capacity (collecting my own data). Picou and Gill's stories of their first trip there in August 1989 when they brought their own cans of beanie weenies, Vienna sausage, deviled ham, and vanilla pudding and did not have proper rain gear resounded in my head. I was determined to be completely prepared and self-sufficient. I brought a laptop and portable printer, printer paper (both plain and letterhead), business envelopes, a package of legal notepads, three cassette recorders with power supply cords, an extension cord, dozens of batteries and mini-cassette tapes, scotch tape, paper clips, rubber bands and small zip lock bags to organize my recorded tapes, floppy disks, postage stamps, permanent markers, and highlighter pens in all colors of a rainbow. Mistakenly thinking I would have time on my hands in the evenings, I brought my box of beading and jewelry making supplies, finding that I only opened it to add beads I bought at the local bead shop. I also brought academic

reading material, which largely remained untouched. I spent virtually every minute of free time when I was not interviewing “soaking up” Cordova.

For August-September 2002 I tried to reserve a room downtown at the Prince William Motel where I had stayed in 2001. However, I discovered it was completely booked – primarily with sports fishermen there for silver salmon season. I initially stayed at Bear Country Lodge, an incredibly beautiful place out on Lake Eyak a few miles from town, then moved to the more centrally located SeaView Condo just off Main Street. This allowed me to walk to most places in town in a matter of minutes and provided a convenient and comfortable interview setting.<sup>22</sup> SeaView proved to be an ideal location, complete with kitchen, full laundry facilities, television and VCR, and an answering machine. I stayed there on each of my subsequent trips; the owners stored items I did not need to haul back and forth, and it became my home away from home.

After a short time in Cordova I realized, as have many field researchers before, that most of what I learned about the community would not come from formal research activities. Rather, much of the richest data I gathered came from observing and participating in daily life. Although I was familiar with EVOS research, had reviewed newspaper, magazine, and video news coverage of EVOS, and listened to accounts of Gill and Picou dating to their first fieldwork in Cordova, I am quite certain that nothing I could have learned second hand would have adequately prepared me for my first weeks on my own in Cordova. I had taken graduate level coursework in qualitative research methods, read about conducting fieldwork of this sort (e.g., Patton 1990), and with the

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<sup>22</sup> I was fortunate to have resources to rent a vehicle, which was very different from my mentors' 1989 experiences as they primarily collected data on foot. In January-February 2003 I decided not to rent a car to save research funds – car rental was \$70.00 per day – knowing I could borrow a vehicle if I needed.

help of others did my best to arrive prepared in Cordova. This was no substitute, however, for personal experience and learning that accompanied it.<sup>23</sup> For example, I learned never to be without pencil (ink pens tend to run in the rainy Cordova weather) and paper after just a couple of occasions when things I was sure I would remember faded too quickly. Rather than use the larger notepads I had brought with me from home, I purchased a small notebook that neatly tucked into my raincoat pocket. When in social or informal settings, so as not to look like “Harriet the Spy,” I would slip off to a restroom to record my thoughts or discretely write under a table or in a corner.<sup>24</sup> On a number of occasions when I was not formally interviewing but when discussion turned to EVOS-related topics, I asked permission to take notes.<sup>25</sup>

Because of the truly “small-town” nature of Cordova, every time I set foot in public settings – including walking down Main Street – I encountered opportunities for interaction. Beginning in August 2002, I began writing in what became a series of journals dedicated almost entirely to my research and associated experiences.<sup>26</sup> At the suggestion of Dr. Picou, I recorded my daily activities while in Cordova, particularly as

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<sup>23</sup> Although my professional work at the Social Science Research Center involves a variety of research, none of my project experience to date involved such intensive subject matter or lengthy fieldwork as this study.

<sup>24</sup> *Harriet the Spy* is a children’s novel by Louise Fitzhugh (1964). The main character is a young girl named Harriet, who daily walks her “spy route,” observing and writing down anything of interest to her.

<sup>25</sup> In no cases did individuals request that I not take notes. I treated this information as data, though it was not transcribed, employing the same protocols for protecting human subjects as with my formal interviewees.

<sup>26</sup> The first of these journals was a gift prior to my departure for Alaska in August 2002. Thanks to Ginger, Lynne, and Debbie for their forethought and their message “To our dear friend Liesel. We love you and believe in you.” The journal cover reads: “Only as high as I reach can I grow, Only as far as I seek can I go, Only as deep as I look can I see, Only as much as I dream can I be.” I did not recognize then the significance of these words at the time and am not sure they did, either. I certainly do now.

they related to my dissertation research. Between trips, my journals served as a forum for documenting my reflections about the study. The process of documenting my experiences proved invaluable from both a research and personal standpoint. By the end of May 2003 I had filled almost six journals with extensive, detailed notes containing personal observations, accounts of interactions with Cordova residents and friends, and various thoughts about my research.

At first, it was very evident to locals I was new in town and I was met with quizzical and sometimes what I would characterize as “suspecting” looks. On one occasion, a man in his seventies referred to me as an “Exxon narc” under his breath; another local, knowing why I was there, quickly defended me. Several times, while eating a meal or having coffee, individuals approached me and either already knew why I was in town or asked about why I was there. I captured one of the most memorable encounters in my journal (September 17, 2002), when a fisherman I estimated to be in his sixties joined me for coffee upstairs at The Killer Whale, a restaurant on Main Street. He wanted to know why I was in Cordova and when I told him he excitedly said in a thick Russian accent: *“From the first that I saw you, down at AC [the grocery store], I knew you were here for a purpose. You didn’t walk like a tourist. You are very determined to do something.”* By my second visit to Cordova, almost no one asked why I was there; they already knew (or didn’t care). In fact, after a walk with me down Main Street, an “outsider” I had befriended jokingly suggested I knew so many people I should run for mayor.

My participant-observation activities enhanced my understanding of the Cordova community and provided context for interpreting formal interview data. After initial data collection in September 2002, I planned subsequent visits and data collection around specific community events I was advised would provide rich opportunity to gain insights into Cordova and its people, including the Native Village of Eyak's Sobriety Celebration, the annual Iceworm Festival, and the opening of king salmon season. Over the course of my eleven weeks of field work in Cordova, I interacted with community members in a variety of settings, ranging from intimate family gatherings such as birthday parties and organized community activities such as a visit by the Governor to brief but meaningful encounters in retail stores, offices, and down on the docks.

Each of my days in Cordova uniquely unfolded, though I established a sort of routine around my fluid interview "schedule." I found the town to be deceptively "sleepy" – even when things appeared to be slow such as the fall and winter months, there was always something going on, "projects" in which people were engaged. It was challenging to schedule formal interviews too far in advance. I liken this aspect of Cordova to the Virgin Islands, where time on a clock seems to carry limited importance. I had to be flexible, sometimes changing my own plans to accommodate an opportunity to conduct an interview. I kept my agenda tentative, focusing on the research. I spent many enjoyable mornings at the CoHo Café, writing in my journal, drinking coffee, and eating what came to be known by the owner and waitresses as my "usual" – bacon and cheese omelet with hash browns and sourdough toast. After breakfast I often wandered Main Street, watching the town wake up, sometimes stopping in to say "hello" to folks at Orca

Book and Sound, other times heading down to Redden Marine for another cup of coffee where conversations typically revolved around fishing.<sup>27</sup> I spent wonderful evenings and late nights at the “Pro Shop,” a gathering place in one of the local’s garages, where I tasted my first king salmon, black cod, salmon roe, moose burger, and deer ribs, and wrote on the wall as had hundreds of others before me. It was there I was honored as “Rookie of the Year” by the Pro Shop “Board” in September 2002, perhaps a dubious distinction, but one I cherish to this day. I played my favorite songs, now forever reminders of Cordova, on the jukebox at the Alaskan Bar and the PowderHouse (where I enjoyed my first razor clams and months later played my first game of horseshoes) and danced at Harbor Lights (formerly known as the Dutchman) until the early hours of the morning. I often ate steak as a guest of the Moose Lodge on Friday nights where the bartender makes the best cosmopolitan I have ever tasted.

In September 2002 I attended the annual “Fish Prom” sponsored by Cordova District Fishermen United (CDFU) and watched as incredible desserts – cakes, pies, and truffles – were auctioned for hundreds of dollars each to raise to raise money for academic scholarships. I learned that such fundraisers remain common in Cordova, despite tough economic times for the community. In October 2002 I attended Halloween costume parties, observed kids playing “magic” upstairs at the Moose Lodge on a Sunday afternoon, and was invited to make crafts and drink wine with a delightful group of women who welcomed me into their circle. On that trip I saw for the first time moose and deer being dressed, then processed into burger, steaks, sausage, and roasts. I helped

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<sup>27</sup> I include these details as evidence of the breadth and depth of my field experiences. By doing so I run a risk of failing to acknowledge someone or some establishment; for this I apologize in advance.



wrap, package, and label the fresh meat. In November I experienced the Native Village of Eyak's annual Sobriety Celebration, viewing traditional Native art, handcrafts, dancing, and other cultural activities.

In January-February 2003 I went to basketball and volleyball games at the high school and the boy scouts' derby car races. I observed sessions of the annual Board of Fish Meetings where I witnessed heated discussions between gillnetters and seiners about fishing regulations. I volunteered to be "legs" on the Iceworm in the parade – one of a set of dozens on the creature that weaves its way down Main Street each year. It was in these settings at various times of the year that I learned so much about Cordova, though I fully recognize my experiences reach only in a very limited way those of a full-time resident.

Particularly in May and September, when daylight hours were plentiful, I took advantage of Cordova's natural beauty and what it had to offer. In September 2002 I witnessed the Northern Lights for the first time as they danced over the mountains around Cordova. I became familiar with a number of trails, which I hiked frequently, including the one to Crater Lake and over the top of Mount Eyak. Each trail – among them, Saddlebag, McKinley Lake, Haystack, and Crater Lake – has its own character and selection of which to tackle on a given day depends not only on time, energy, and weather, but one's mood as well. Thanks to a group of sports fishermen I will refer to as "The Chuckleheads," I caught my first salmon on a spinning reel – a silver – and learned to clean it. Pictures of me in borrowed, size 3X waders and X-tra Tuff boots attempting to hold up two silver salmon confirm this experience, which gave me just a hint of what I could expect in May 2003 during the first king salmon opener of the year. Bud Janson,

Jr., Captain of the bowpicker *Fish and Game*, invited me to participate in this important and exciting tradition; for this, I will be forever grateful. I was also blessed with gifts from locals including nagoon berry and salmon berry jelly; jars of kippered salmon; frozen halibut, scallops, moose burger, and cuts of deer; and a beautiful pair of red, hand knit socks that I have already worn thin from wearing them so often.

Perhaps most importantly, my extended visits on five separate occasions afforded opportunities to observe and take part in distinct seasons of the town. The Cordova I found in September 2002 as fishing season was winding down was very different from what I saw in May the year before as king salmon season opened. September brings sports fishermen from around the world to Cordova for the silver salmon run, with packed flights on Alaskan Air into “Mudhole” Smith Airport. In September I also saw commercial fishermen weary from a long, challenging season. Some of them, part-time Cordova residents who spend winters “outside,” were pulling their boats from the water and preparing to leave town. Those not leaving were winterizing their boats, pulling gear, mending nets, and in some cases serving as guides for sports fishermen. At that point, the environment in local establishments was also different with fresh personalities in town, return visitors from years past, and folks saying their goodbyes for the season.

Each of my experiences in Cordova, from the moment I stepped off the plane in May 2001, contributed in some way to this dissertation research. I often wish I had been a part of Picou and Gill’s early work, right after the oil spill, so I could have a long-term perspective as they do and a knowledge base they share. At the same time, they and others in Cordova recognize I bring a fresh set of eyes and ears to their research, as well

as new opportunities for learning and expanding our knowledge about impacts of technological disasters.

### 3.3.3 Sample Design

The sample design for the qualitative components (participant observation in-depth personal interviews) of this study is “purposeful sampling” or “criterion-based selection” (see LeCompte and Preissle 1993; Patton 1990). This methodology addressed Miles and Huberman’s (1984) admonition to qualitative researchers: “Remember that you are not only sampling *people*, but also *settings, events, and processes*” (p. 41, italics in the original).<sup>28</sup> The sampling frame in qualitative research is no less important than in a quantitative study:

Just *thinking* in sampling-frame terms is healthy methodological medicine. If you are talking with one kind of informant, you need to consider *why* this kind of informant is important, and, from there, which *other* people should be interviewed. This is a good, bias-controlling exercise. (Miles and Huberman 1984: 41, italics in the original)

Purposeful sampling not only ensured representativeness of settings, individuals, and activities, but also provided opportunities to capture a range of perspectives in Cordova (addressing aspects of heterogeneity in the community). In making sampling decisions I considered seasonal issues, my research relationship with participants, relationships of potential interviewees with previous and current EVOS research teams, the feasibility of data collection (including availability of participants), issues of validity,

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<sup>28</sup> Buroway (2003) discusses “focused revisits” as an ethnographic technique useful for sociologists, noting possible issues with respect to: “(1) the relation of observer to participant, (2) theory brought to the field by the ethnographer, (3) internal processes within the field site itself, and (4) forces external to the field site” (p. 645). I discuss this further in Chapter VII of this dissertation.

and ethics (also see Maxwell 1996).<sup>29</sup> Finally, as Maxwell (1996) suggests, I considered the possibility of “key informant bias” in my sample design:

Qualitative researchers sometimes rely on a small number of informants for a major part of their data, and even when these informants are purposefully selected and the data themselves seem valid, there is no guarantee that these informants’ views are typical. (P. 73)<sup>30</sup>

With this in mind, participants in the in-depth interview portion of this research were purposefully selected for inclusion based on maximum possible diversity of age, race, sex, and community standing and status. Individuals familiar with the Cordova community were asked to recommend potential interview subjects; these initial recommendations led to additional potential interviewees in purposive fashion. Employing this purposive or judgmental sampling design (e.g., Bickman and Rog 1998; Fetterman 1989; Maxwell 1996; Patton 2002; Singleton, Straits, and Straits 1993; Tashakkori and Teddlie 1998), I interviewed 48 individuals.<sup>31</sup> Approximately one-fourth of the interviewees were individuals introduced to me by Gill and Picou; the remaining participants were individuals I met independently while in the Cordova community. With the exception of one individual intentionally selected for participation based on his extensive community involvement, each person I interviewed was living in Cordova at the time of the *Exxon Valdez* oil spill (39), was in the process of returning to Cordova for

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<sup>29</sup> I prefer the terms “interviewees” or “participants,” rather than “subjects,” and use this terminology throughout the remainder of this document. Exceptions to this are when I am referring specifically to protocols implemented to protect human subjects.

<sup>30</sup> Maxwell cites a study by Poggie (1972) demonstrating that key informants tend to assume greater uniformity than exists in communities or groups.

<sup>31</sup> My original dissertation research proposal indicated that 25 to 30 individuals would be interviewed. Once in the field in September 2002, it became clear that the population was interested and very willing to participate in my study. Thus, the sample was expanded resulting in a total of 48 interviewees.

the 1989 fishing season after spending the winter “outside,” (five), or had what I considered “strong ties” to the community that resulted in their returning to Cordova shortly after the spill (three).<sup>32</sup>

#### 3.3.4 In-Depth Personal Interviews

In-depth personal interviews provided narrative accounts of life in Cordova before, during, and after EVOS. These qualitative data represent the centerpiece of my research design, exploring respondents’ perceptions of community change in the wake of a technological disaster (particularly, the *Exxon Valdez* oil spill). I conducted in-depth personal interviews based on a semi-structured interview guide (in conjunction with participant-observation) to collect primary qualitative data. By providing Cordovans an opportunity to share their experiences related to EVOS and associated secondary impacts, I garnered a better understanding of how social capital in this community has changed since 1989.

Using this method, I explored relationships between social capital and documented effects of technological disasters in ways quantitative research could not. Although aspects of social capital (e.g., perceptions of community and community change, social disruption, trust, and conditions resource loss) have been quantitatively measured in a variety of ways since 1989, voices, experiences, and perceptions of Cordovans link empirical data to “concrete” narratives of diminished social capital in the years since EVOS.

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<sup>32</sup> Respondents’ “strong ties” to Cordova are evident in that 1) they still live in the community almost 15 years after the spill and 2) they felt compelled to return to Cordova in its time of crisis.

Information gleaned from a comprehensive review of EVOS research and methods employed by Gill, Picou, and others over the years provided a point of departure for developing a qualitative interview guide to address my own research questions regarding social capital in the aftermath of EVOS (See Appendix B). Additional topics such as personal and family background, as well as opportunities for participants to describe commercial fishing experiences, subsistence lifestyles, and ties to the environment in the Cordova community, provided a context for exploring and discussing various aspects of social capital and Cordova as a renewable resource community.

Although I considered utilizing a pre-interview questionnaire to capture basic sociodemographic data from interviewees (e.g., Bartkowski 2001), experience with the Cordova population dictated that such questions could be addressed during the interview process. This information included participants' age, race/ethnicity, sex, and education, as well as 1989 and 2002-2003 data regarding marital status, number of dependents, income, and occupation. Often, respondents volunteered aspects of these variables as part of responses to other interview questions (e.g., contextual questions regarding personal and family background or about economic impacts of the EVOS) and I appropriately probed to obtain more complete information. When this did not occur, I formally posed the questions at the conclusion of the interview process. These quantitative data enabled me to socially locate respondents, thus ensuring an appropriate sample, and to enrich qualitative data obtained in the interviews. Similarly, rather than asking participants to respond to resource and stress items as found on previous EVOS surveys (e.g., from the *Conservation of Resources Model*, the *Impact of Event Scale*, and the *SCL-90R*), this

information was pursued through a semi-structured approach (i.e., through open-ended questions). Responses to these items allowed me to follow alternate lines of questioning during the interview process.

#### *3.3.4.1 Interview Protocol*

Once an initial list of fifteen potential interviewees was developed, I sent introductory letters to these individuals. The introductory letter provided an overview of the study, its purpose, and indicated recipients would be contacted by telephone to personally request and schedule an interview (See Appendix C). In some cases, it was more appropriate to make initial contact by telephone or in person; in these situations, individuals were provided a verbal overview of the study's purpose and protocol, and provided written information about the study prior to the interview. Appropriate measures to protect human subjects were developed and employed while conducting the research; approval of these protocols was secured through Mississippi State University's Institutional Review Board (See Appendix C).

Interviewees were compensated \$50.00 for their participation.<sup>33</sup> Those agreeing to participate provided written consent prior to the interview (See Appendix C). Interviewees were paid with a money order upon completion of the interview schedule, with the exception of three interviewees at the end of the study who received their

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<sup>33</sup> See McNabb (1993) for a rationale regarding payment of human subjects in Alaska. Interestingly, several interview participants did not wish to be paid or did not seem to realize (despite the fact that my protocol included this information on the informed consent) they were going to receive compensation for their time. In cases where individuals attempted to decline payment, I explained that compensation was required according to my protocol, suggesting they might donate the money to a cause of their choice.

payment via mail.<sup>34</sup> Individuals wishing not to be interviewed were not re-contacted and potential replacements were contacted. None of the individuals I initially contacted by letter refused to participate in my study. Despite repeated attempts, however, there were two people with whom I was unable to follow up on any of my visits due to their schedules. During my fieldwork there were four situations in which people to whom I had been referred by other interviewees either declined to participate in the study or were unavailable. In two of these cases the individuals indicated they were uncomfortable revisiting the oil spill and events associated with it, noting they had been interviewed a number of times over the years and just “couldn’t go there” anymore. I gently probed for additional information and determined their previous interviews had been with media and/or attorneys, in the context of official responsibilities as part of a formal organization. This sentiment has also been reflected in survey research conducted by Gill as recently as 2001.

Two other potential interviewees were less direct in their refusals and their explanations of them. In one case, my several calls were not returned after the individual expressed interest in participating during face-to-face communication on two separate occasions. In the other case, the individual’s spouse who had suggested to me that she might like to be involved in the study, declined on her behalf.

Those agreeing to participate in the study were interviewed in person, on location in Cordova, Alaska. Interviews were conducted in a variety of settings, depending upon interviewees’ preferences. Locations included individuals’ homes, places of employment

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<sup>34</sup> I did not anticipate being able to conduct so many interviews and had to obtain additional money orders upon my return to Starkville in February 2003.



(ranging from offices to bars, restaurants, and boats), a local restaurant, and my field office. On one particularly sunny day, at the request of the participant, I conducted the interview as we walked and talked for two hours along Cordova's Cannery Row, past Flemming Spit, and beyond Hippie Cove. In two instances, interviews were conducted concurrently with two individuals (i.e., for a total of four interviews). These situations are reflected in this dissertation by presenting exchanges between interviewees as "R1" (respondent 1) and "R2" (respondent 2). In each case, my goal was to make the interview process convenient for participants as well as ensure that interviewees were as comfortable as possible, given the sometimes emotionally difficult subject matter.

#### *3.3.4.2 Interview Sample Characteristics*

As shown in Table 3.1, the final sample of forty-eight included twenty-two (48 percent) active commercial fishermen. "Active" commercial fisherman refers to individuals designating commercial fishing as their primary occupation in 2002-2003. Five of the active commercial fishermen I interviewed were female.<sup>35</sup> An additional eleven interviewees were no longer actively fishing, though they commercially fished either full or part time prior to 1989; of these, nine were women. Of those interviewed, eleven (27 percent) were spouses of commercial fishermen. Alaska Natives represented 29 percent (n=14) of the sample. Overall, the sample consisted of a number of key actors from the community at large including businesspeople, government officials, individuals associated with the Native Village of Eyak and Cordova District Fishermen United,

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<sup>35</sup> According to my research, as well as the experiences of Picou and Gill, women involved in the commercial fishing industry refer to themselves as "fishermen." This terminology is used throughout the remainder of this dissertation.

Table 3.1 – Interview Sample Characteristics

<u>Category</u>	<u>Number of Interviewees</u>	
Active Commercial Fishermen	<u>Total:</u> 22 (48%)	<u>Males:</u> 17 (77%)
		<u>Females:</u> 5 (23%)
Spouses of Commercial Fishermen	11 (23%)	
Former Commercial Fishermen (in 1989)	11 (23%)	
Alaska Natives	14 (29%)	
Male	22 (46%)	
Female	26 (54%)	
Year-Round Cordova Residents	42 (88%)	
EVOS Litigant	38 (79%)	

individuals prominently involved in EVOS litigation activities, and mental health care providers.

My sample of forty-eight included twenty-six women (54 percent) and twenty-two men (46 percent). At the time of the interview, the average age of interviewees was 51; men averaged 54 years of age, while the average age of women was 50 (See Figure 3.3). Interview participants had attained the following levels of education: less than high school (n=3); high school graduate or GED (n=16); high school or GED plus technical training (n=3); some college (n=10); college degree (n=10); some post-graduate work (n=2); and advanced degrees (n=4). Sixty-five percent of participants indicated they were married. The remainder of the sample indicated they were divorced, had never been married, or were widowed. More than half (54 percent) had dependent children at the time of the interview. In 1989, 58 percent of interviewees had dependent children.

Most interviewees (88 percent) were year-round Cordova residents; the remainder were seasonal residents. The average year-round resident indicated they had lived in Cordova 28 years.<sup>36</sup> Seasonal residents or part-timers indicated they had been coming to Cordova an average of 32 years to participate in commercial fishing. A majority (79 percent) of interviewees indicated they were involved in EVOS litigation. Not surprisingly, a number of participants seemed reluctant to provide household income data for 1989 and 2002-2003. I attribute this to a variety of possible reasons, including economic hardships endured by residents since 1989 and potential accompanying

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<sup>36</sup> This year-round figure includes individuals who indicated they left Cordova temporarily to attend college or travel.

<i>Average Age of Interviewees:</i> 51
<i>Average Age of Male Interviewees:</i> 54
<i>Average Age of Female Interviewees:</i> 50
<i>Average Years of Residence in Cordova:</i> 28
<i>Average Years of Seasonal Residence in Cordova:</i> 32
<i>Number of Married Interviewees (2002-2003):</i> 31
<i>Number of Interviewees with Dependent Children (2002-2003):</i> 26
<i>Number of Interviewees with Dependent Children (1989):</i> 28
<i>Number of Interviewees with –</i>
Less than High School Education: 3
High School Degree or GED: 16
High School or GED Plus Technical Training: 3
Some College: 10
College Degree: 10
Some Post-Graduate Education: 2
Advanced Degrees: 4

Figure 3.3 – Interview Sample Description

embarrassment, feelings of discomfort (almost “guilt”) for those who apparently were financially doing well in the aftermath of the spill, and possible concerns about ongoing litigation (though at this point my data would not be admissible in court proceedings). As one interviewee stated “I don’t give that personal information to anyone.” Those who did

report incomes for 1989 and 2002-2003 indicated substantial decreases, ranging from less than one-fifth to one-half of their 1989 income.<sup>37</sup>

Another possibility regarding this reluctance is a characteristic tendency of commercial fishermen to not disclose “catches,” essentially a proxy for their incomes. On a number of occasions, it was made clear to me that how well a commercial fisherman did on an “opener” or fishing period was not open for discussion unless he or she brought it up. I personally witnessed fishermen withhold information from others about their success during any given period. In fact, I was told that radio communications about fishing success or lack thereof by any given individual at any given location should be considered suspect. Because income was not a primary focus of my study I did not press for responses.

### **3.4 Analysis of Interview Data**

Based on my interview guide, I expected each interview to last approximately two hours. The shortest interview was 45 minutes; the longest lasted eight hours over a period of two separate days. Average duration of interviews was two hours. I recorded each interview using two micro-cassette recorders, providing backup in the event of mechanical failure. Interviews were subsequently transcribed and quality checked; hard copies of transcripts were then edited.<sup>38</sup> Additionally, I took notes during the interviews,

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<sup>37</sup> These figures are similar to Gill and Picou’s data.

<sup>38</sup> The quality check process involved transcribers listening to recorded interviews for accuracy while reading original electronic transcripts; the individual conducting the quality check on a given interview was different from the original transcriber. The editing process involved a review of hard copy versions of the

recorded my own observations immediately following interviews, and kept an extensive, detailed journal to enhance analysis of recorded accounts. Identifiers were not removed from transcriptions or notes until completion of the study and preparation of this dissertation. This allowed me to re-contact interviewees for clarification or elaboration during the analysis phase of my research.

Each transcribed interview was reviewed in its entirety no less than 20 times during the initial reading and subsequent editing, data coding, and data analysis process. Although I originally intended to employ qualitative data analysis software, I decided to use traditional qualitative techniques in my analyses.<sup>39</sup> As designed, collective responses to the interview guide topics generated a variety of themes consistent with addressing my research questions. Generally, respondents' accounts have been developed as chapters or as subsections within chapters for this dissertation.

In keeping with Erikson's (1976a) admonishment to researchers who "use quotations extensively to explain in some detail what liberties have been taken with them," (p. 15) the "voices" of Cordovans are presented throughout this dissertation in their original form. I took limited "liberties" with narratives of my interviewees. Thus, it is important for readers to keep in mind that narratives offered herein are based on perceptions of interviewees. Presentation of narratives was designed to (1) ensure protection of human subjects; (2) preserve the context and essence of interviewee comments to maintain accuracy; and (3) allow for ease of reading by reviewers.

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transcripts. Corrections were made to ensure accuracy of spelling, names of locations, and other pertinent information.

<sup>39</sup> I purchased QSR NUD\*IST software but found it cumbersome to work with.

Furthermore, I use narratives extensively throughout Chapters IV through VI. As Fetterman (1989) contends:

Verbatim quotations are extremely useful in presenting a credible report of the research. Quotations allow the reader to judge the quality of the work – how close the ethnographer is to the thoughts of natives in the field – and to assess whether the ethnographer used such data appropriately to support the conclusions. (P. 22; also see Bogdan and Taylor 1975; Creswell 1998; Wolcott 2001)

To protect identities of those I interviewed, I removed names of persons, businesses, and boats. If interviewees were seasonal, I employed vague references to their places of residence outside Cordova (e.g., “in the Lower 48” or “in the Midwest”). If an individual had children, I removed any references to the sex of the child(ren) and/or any specific information concerning their age(s).

Again, following Erikson’s (1976a) lead, I did not tidy the grammar of interviewees. To allow for easier reading, narratives (quotes) were formatted by removing “filler words” commonly heard in verbal accounts (e.g., like, um, yeah, but, so, you know, I mean). Similarly, repeated phrases were removed, unless it was apparent they were restated for emphasis. Ellipses indicate instances where information not pertinent to contextualizing a narrative was transcribed (e.g., see Erikson 1976a:15). Care was taken to ensure that individuals’ comments were not taken out of context.<sup>40</sup> Indeed, those who shared their narratives and time with me entrusted me with their thoughts and

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<sup>40</sup> As one of my interviewees told me: “[The media] took [what I said] out of the context.... The words were fine, but ... when I was talking about something they would ... just cut and paste, put it wherever they wanted ... to give the message that that person wanted to give. It was no longer portraying the truth because it was out of context. I decided not to give any more interviews because there was a feeding frenzy with all the people here.” (2)

words. As an Alaska Native told me, “We will just trust in how you put [our stories] together.” (2)

Specific information regarding operationalization of concepts is presented in Chapters IV, V, and VI. Chapter IV offers contextualizing narratives demonstrating how the ecological-symbolic perspective and concept of renewable resource community “flavor” the findings presented in subsequent chapters. Findings that speak to social capital with respect to recreancy are addressed in Chapter V. Narratives discussing individual stress and collective trauma, the corrosive community, lifestyle change, lifescape change, and secondary disasters are presented in Chapter VI. These accounts incorporate perceptions of individual, family, and community level activities relating to social capital prior to the EVOS, as well as those in the spill’s immediate aftermath through 2003.

Additional emerging themes were also categorized and analyzed within the theoretical framework, with particular attention to differences among responses and accounts among commercial fishermen, non-fishermen, spouses of commercial fishermen, and Alaska Natives. Narratives of each identifiable group were compared, providing an opportunity to learn more about how roles and culture are linked to attitudes and beliefs about community and environment. Furthermore, these comparisons afford an opportunity to explore how different factors influence trust and associations, i.e., social capital.



## CHAPTER IV

### CONTEXT:

#### NARRATIVES OF CORDOVA'S ENVIRONMENT

##### **4.1 Introduction – The Ecological-Symbolic Approach: Cordova as a Renewable Resource Community**

Interpreting the qualitative findings of this study requires a contextual understanding of the natural, built, and social environments of the Cordova community. According to the ecological-symbolic approach (Kroll-Smith and Couch 1991a, 1991b, 1993a, 1993b), how a community interprets events associated with technological disasters is strongly influenced by its relationship with the type of environment that is damaged. The exchange relationship between Cordova and the natural environments of PWS (PWS) and the Copper River Delta is by virtually all accounts a very close one. Furthermore, the town is considered a renewable resource community (RRC), relying on renewable natural resources for its primary cultural, social, and economic existences (Picou and Gill 1997).

This chapter offers an overview of these aspects of life in Cordova, particularly with respect to the town's reliance on renewable natural resources and social atmosphere associated with a subsistence lifestyle. The information presented in the following sections addresses my first research question about how the ecological-symbolic

perspective and RRC concept contextualize social capital. I begin with commentary on Cordova's ties to the natural environment, followed by a discussion of how social and cultural cycles correspond to biological cycles. I then present contextualizing information regarding Cordova's built and social environments both pre- and post-oil spill. This is followed by a general description of social capital in Cordova, including people's experiences growing up in the community or first arriving there. The chapter then turns to discussions of drawbacks associated with living in Cordova and issues of social divisions and "bonding" social capital. I conclude by briefly addressing how the ecological-symbolic perspective and RRC concept contextualize social capital in Cordova, particularly since the *Exxon Valdez* oil spill (EVOS).

#### **4.2 "It's in My Blood:" Cordova's Ties to the Natural Environment**

The respect Cordovans have for the importance and beauty of the natural environment is apparent in their actions as well as their words; they do not seem to take their surroundings for granted, particularly since the EVOS. Cordovans largely define themselves with respect to their relationship to the natural environments of PWC and the Copper River Delta and their dependence on renewable natural resources for their way of life. Ties between Cordova and the natural environment are well articulated by Cordova residents themselves. Their eloquence on the subject is in part evidence of Cordovans' appreciation for the delicate balance between harvesting, maintaining, and protecting regional resources, as well as cultural aspects of these processes. A local businessperson was exceptionally passionate in describing her life in Cordova:

I love it here. It is better than any place in the world.... Just being able to look outside on a day like this gives me Goosebumps, just talking about it. I walk to work in the morning and see the stars and it's just overwhelming, how beautiful it is. People have no idea. People pay money to come up here for vacations and I get to live here. My history is here.... It's in my blood. I couldn't imagine living anywhere else where I couldn't see the mountains and the water.... I've been all over the place and there is beauty everywhere you go, but it's not the same. I can look outside on a good day, even a bad day, and I can get tears in my eyes because it is so beautiful here. It is like this kind of little utopia that has its own problems because we are people, but that just the way it is. It's so beautiful and perfect.... Most of the people that live here truly understand that and relish the fact that this is the coolest place to be. You might go outside<sup>1</sup> for vacation or complain that milk costs too much, but at the end of the day it's 'Just how lucky are we?'

The comments of a commercial fisherman indicated similar sentiments:

Prince William Sound, even though we still have oil out there, it is such a beautiful place. There are the bays, and the coves, and the animals, the whales.... My son and I last summer were going across the Sound to go fishing at Main Bay. We ran into a pod of killer whales. To see that ... that is what I love so much about it.... It is right there, and people pay thousands of dollars to go see that. That is my lifestyle to go do that, to go see that on a daily basis. I just dig it. It is so cool. That is the reason for being there.... I am praying to God I can [stay here.]

One Alaska Native woman, a former commercial fisherman noted,

When you were actually fishing you lived according to the tide.... The clock only meant something as it related to the tide.... Your whole relationship was with the ocean, the fish, and basically the tides, especially on the Copper River Flats ... [where] the tides rule everything.... The tides and the weather [rule everything].

Another long-time Cordova resident and commercial fisherman commented on the power and force of nature:

You can't get away from the enormity of it all. You can't get away from it.... It's not diminished. This is ... untrammled. You know, nature owns this place. We are participants in it by the fact that nature relents enough

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<sup>1</sup> Cordovans refer to geographic regions beyond Cordova as "outside," and to people living outside as "outsiders."

to let us hang tough. I think of where we live ... one of the windiest locations in town. When it storms the trees that surround our house make such a roar. If we didn't have the stand of trees in front of our house the house would be blown up on end.... When the wind blows, wow, does it roar, does it roar the house. We sleep with the window open at night and when it is blowing we hear 'whooooooooooooo.' [Nature is] there. It is right there in front of us all the time and that is just one sight. That is just nature's edge. Then there is also just the pure ... beauty of it all. I get out sometimes at 2:00 in the morning. Sometimes I just get up and go outside and look at the sky and watch the northern lights, which is a treat, just like hands flashing in the sky. You don't see that elsewhere. I haven't seen that down in the Lower 48. You don't have as much interference in the form of lights, and jets, and cars, and traffic, and noise, and sirens, and all that stuff. What you see here is pretty fundamental.

Many of those I interviewed recalled first arriving in Cordova and their impressions of the natural surroundings. A number of them felt like they had "come home," as these narratives described:

For me it was just the feeling of the land [that made me feel so at home when I first came to Cordova].... You come in the Main Street [and] ... it just has this intrinsic beauty. You look around and the mountains are so astounding. They are just so unique. It is like the mountains have their own personality, each mountain.... I just looked around, and I looked out into Orca Inlet and I saw little Mummy Island. It was just like, 'Oh my God.' It was ... some of the most beautiful country I had ever seen in my life. I was raised in a pretty place ... but it's just the way the land is laid out [here]. It is just so beautiful and the silhouettes of the mountains and just ... the lay of Orca Inlet. I don't know; it just captured my heart.... Literally, I felt like I had come home. It was just like 'I can breathe easier.' And the feeling I can't really [explain].... The beauty of the land ... feeds my soul.

I came [to Cordova] as a tourist. I had plans to be here for just a little while and try to get out on a fishing boat and from there head on into the interior [of Alaska] and do some climbing and then go down to the Aleutians and check things out there and then go home and get married (*laughing*). Little glitch happened. I fell in love with Cordova and very shortly after my coming here I met my present husband. I believe that somebody had a higher plan for me than what I had.... When I came here, the weather was like this [foggy and rainy] and it was the end of March....

[For] the first three or four days it was all socked in.<sup>2</sup> All I could see was a little bit of water here and the foothills here and that was it. I hadn't been out the road<sup>3</sup> because the second day here I started working in the canneries and was working for 14 hours. So when the sun came out like that fifth day I [thought], 'Oh my God, this place is beautiful.' I could see Hawkins Island. I could see the mountains out here and I was really chomping at the bit to get out the road and see places. I spent my entire life ... in the foothills of the Adirondacks doing a lot of hiking and climbing in the ... mountains of Vermont and New Hampshire. We had a summer home [on the eastern shore of the United States] so I had the best of both my worlds, the mountains and the ocean here. That day five it was like I fell in love.

When I came to Cordova ... I fell in love with this community. I don't know of a community that has touched me more than this town right here. I love to go out the road. I love to see the mountains. I love to hike. Sometimes I go by myself because ... sometimes I like to be alone with my feelings. It's a time I call 'airing out the cobwebs,' when I can go out the road and I can see the beauty. It may be a frustrating day [but] ... coming back refreshed, knowing that there are great things ... give[s] me the courage to keep traveling on.

That's what brought me to Alaska – a little R and R (rest and recuperation), and adventure and looking at an intact ecosystem. I ended up finding a lot more than I ever imagined.... I found Cordova, luckily.

Understandably, connections fishermen and non-fishermen have with their natural environment are unlike those experienced in urban settings. The mere "proximity" of nature – being able to look outside and see the water and the mountains, being able to go out the road just a few miles to hunt, hike, pick berries, fish, or watch birds – strengthens these ties. A 42-year-old fisherman with a post-graduate degree commented about feeling like a part of environmental processes and exerting some level of control over her life, rather than being dependent on a large, urban infrastructure:

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<sup>2</sup> The phrase "socked in" means fogged in, a common occurrence in Cordova.

<sup>3</sup> The phrase "out the road" is commonly used by Cordovans in reference to driving out the highway toward the glacier. They also refer to various locations along the road according to mile markers – e.g., "Seven Mile."

[When I first became involved with fishing, I liked] the fact that I was participating in something, that I was potentially putting food on people's tables. Because one of my problems with living in the city all along ... was I felt really disconnected from basic processes in the earth, that you turn on the light switch and got light. You turn on the faucet and got water. It really bothered me a lot. [That was] one reason that I wanted to be in Alaska and liked ... it better than [outside].... Fishing fit right into that. It made me feel like I had some control or ... to some degree I was directly responsible for keeping myself alive. I wasn't dependent on the modern transportation [system], social structure and everything else to do everything for me. I was physically doing something myself, if that makes sense.

This theme was also evident in other narratives:

I say, 'Thank God I live in Cordova' because we still have the ability to turn it all off. If the rest of the world went away we would be fine here as long as they haven't oiled our environment to the point were we couldn't still get fish, because in Cordova we are real close to the earth. I don't think people realize ... what an intrinsic part of our lives our environment is. The Copper River Delta is just this still bountiful, bountiful provider for ... not just our community.... We feed a lot of people with our fish, a lot of people in the world.

The perspective is quite different [from where I used to live on the east coast]. I loved the idea of working hard in a beautiful environment.

[In the late 1980s when we came to Cordova], one red salmon was worth more than a barrel of oil. While the rest of the state's economy was in a nosedive, Cordova's was pretty stable or maybe on a slight rise, because it was not based on oil. We thought, 'If we move to Cordova, we would be free from any sort of adverse economic effect by Arab cartels ... or any kind of adversity in the industry at all.' That's why we moved here.

The comments of others further highlighted that those living there genuinely appreciate Cordova's natural environment. Many of those with whom I spoke chose to remain in the community after visiting or growing up there, citing a variety of reasons. A number of Cordovans commented on valuing their ability to interact with the natural environment, especially wildlife. In large part this is possible because of the remoteness of the area:

[If I weren't working today I'd] just drive ... look for animals, take a walk on the Alaganik Boardwalk ... look at the frogs, just get out. I like it out the road. I grew up ... just a couple miles out of town. You have to take a boat to get there.... I grew up with just ... a generator, no TV, instant milk, instant eggs.... I like to get out there and look at the frost on the leaves or ... look at the birds fly or look at eagles standing there ... isn't that amazing? That kind of stuff is what gets me.

You didn't have to go 50 miles out of town ... just to shoot the gun or to get away from people. You could get away from people easy here. Plus the beauty of it here is just phenomenal. I never, ever tire [of it], ever. I've never been any place like that. Every time I go out ... it's beautiful. Whether it's raining, blowin', ugly, whatever.

I love to [go hiking and] listen to the trees ... they clap their hands [when it blows].... The glaciers that I've hiked on, seeing the beautiful baby blue and seeing the wonder and going out to the Million Dollar Bridge and out to the glacier.... You don't want to go home. [You think] 'Maybe there's going to be one more chunk [break off of the glacier], just one more. I've got to see it.' [I like] to stand there and to see that beauty.... I have encountered bears head on because of my going out the road and doing the things I do and I think, 'Wow.' I've seen mother bear and her cubs; I've met them head on.

I came up for a two-week vacation [in the mid-'70s] and didn't get home for two months.... I loved the community, loved the area. I lived out on Mummy Island.... You can't get to it except at high water ... no electricity, no phone.... We had a radio. We could listen to KLAM, the local station, but no communication radios. I just loved living out there.

For the most part, people I interviewed were not individuals who appreciated Cordova because they had nothing to compare it to. Rather, they had spent time in other parts of the country and, in some cases, the world and recognized the uniqueness of Cordova's natural environment. The diversity of Cordova's natural environment is another reason many people choose to live or remain in the community.

I made the right decision ... staying up here, for sure. [There are] a lot of things we can do up here in Cordova that we don't get to do in the rest of the state of Alaska, that you don't get to do in the rest of the world for sure.... Like go out through your back yard here and hike up the top of the mountain and jump off of it with a snowboard.... September 5<sup>th</sup> you can

go catch silvers, go shoot duck while you are catching silvers, drive out the road – possibly shoot a black bear, a brown bear, or a moose all in the same day. I had one good day where I had two fish on the bank, no one else was there, at Clear Creek.... I had two ducks in the back seat of my car already, and then [my friend] drove up and said [our other friend] had just shot a moose down the road. I threw my fish in the back of the car. They were [still] flopping. My ducks were still lying there warm. I went down the road and helped them gut the moose, and ended up getting in on half of a moose. That was a good afternoon (*laughing*).

Another individual who was born and raised in Cordova spent time outside in Europe and Hawaii. By her own account, she has seen a lot of really beautiful places. When I asked how they compare to Cordova, without hesitation she replied, “There’s no comparison. It’s the most beautiful place in the world, even on a rainy day. I love it (*laughing*). In fact, I like the rain.” Our conversation continued:

I: If you had your choice of living anywhere in the world, would it be here?<sup>4</sup>

R: Yep. I’m not going anywhere.

I: When you went outside did you feel uncomfortable at all?

R: No.... I just feel very safe and very comfortable here.

Data collected from Cordovans in 1992 reveal that 65.8 percent would “definitely” or “probably” choose to live in Cordova if given the choice of living anywhere in the world (Picou and Gill 1995b). Another Cordova transplant, now raising her family in the community, stated:

I love it here. I don’t want to live any place else. I don’t think if I lived in a city that I could do half the things that I do here because it’s so close. Everything that I want is all around me. Everything that I want to do is all around me.

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<sup>4</sup> From this point on in this dissertation, I: represents “interviewer” and R: represents comments of respondents.



Individuals I interviewed frequently referred to a “connection” with the environment, recognizing they were part of something greater than themselves:

I had a very strong connection [to the environment] ... [I am] very much an outdoors person and I think that is probably what initially caused [my husband] and me to click so well is because he is very, very close to the outdoors as a fisherman and a hunter.... I have ... gotten him to just enjoy the outdoors just for the outdoors sake, and the beauty doesn't have to [be about] ... climbing a mountain just because there is a mountain goat or sheep or something at the top of it (*laughing*).

I remember being with my [seining] crew in one of the earlier years ... one of these years where I think it rained continuously from Thanksgiving until August.... The sun came out in August, and we were down in a beautiful part of the Sound, down in the southwest end. I remember talking to the crew and saying, ‘This is my office. How do you like this?’ This is an astounding place to be.... A lot of times when I think about ... the fisheries and my place in the fisheries and I feel honored to be there, honored to be doing that stuff. It is just an incredible place.

In almost every case, those I interviewed commented on the aesthetic beauty of the land and the water around Cordova and the importance of access to both. A commercial fisherman who has lived in Cordova for almost 30 years simply stated: [My first impression of Cordova was that it was] God's country. God's country. Best place I'd ever seen.

One well-traveled woman in her early 50s who has lived in Cordova for more than 25 years explained what she valued about physical aspects of the area:

[Water has] always been important to me. Mountains have also always been a great love of mine, so Cordova's environment is sort of ideal for what I like.... The setting here is one of the most beautiful places that I have ever seen in the world. The combination of wetlands out on the Copper River Delta and forest and meadows on the way up through the hills is not one that you find many places in the world and have easy access to such.... Living here gives me access to things that I find important on a personal level.

Many Cordovans, including commercial fishermen, non-fishermen, and Alaska Natives “know” PWS, as well as other aspects of their natural environment. Again, “knowing” the Sound fosters a special connection that visitors and tourists may not be fully able to appreciate:

I was born and raised my entire life in Prince William Sound. I know it like the back of my hand. When they discuss any beach, I know that beach intimately. I have walked on it, you know? I just know it.

When I was [out] ... in Prince William Sound, I kept a guidebook because memory fades and it is 3,000 miles of coastline. It is hard to remember if there is a beach coming up or if the beach coming up has enough space ... or if it is even a beach at high tide, if there is fresh water at the beach, if there is firewood at the beach, if there are any kind of signs of prehistory and what kind of flora and fauna are there; all that kind of stuff I kept in this little guide book ... maps and sketches.... After a period of 10 years it turned into quite a stack of lay data.... My wife and I ... decided what we'd really like to do is just go out into the Sound in the spring and just stay there until the fall, and in fact, that is what we did ... every year for five years. During that period of time we did not go back to any village or community. We just stayed out.

A lifetime resident of Cordova and commercial fisherman grinned as he told me, “I have a Ph.D. ... in the water, the fish, the wildlife, and the people.” Another commercial fisherman recalled an encounter with an Exxon scientist shortly after the EVOS telling him, “I have a Ph.D. in Prince William Sound from 50 years of living here. That is my Ph.D.” For commercial fishermen, this “degree” is necessary for earning a living. This further drives their understanding of PWS, but it is more than just knowledge. It is a sort of intuitive sense – a connection – based on years of experience, as this female commercial fisherman articulated:

Usually you have your mind made up where you want your opener set. By that time usually it is determined on what the tide's doing, what the weather is doing, sort of intuition, how you did there three years

previously.... You usually get these feelings after you have done it so many years.

Interestingly, the comments of one long-time Cordova resident indicated the EVOS increased people's appreciation for their natural environment:

One of things that I was surprised by and found to be a positive side to the spill in 1989 was seeing fishermen who had spent all their lives going out in the Sound and making their living ... in absolute tears and really, really desperately upset by the loss of bird life, the wildlife, and just the physical impact on the beaches of this oil being out there.... I guess the positive side that came out of that was that they started treating the Sound with more respect than I think they had previously and in the mid-'80s. When I had seined it had been very common to put your garbage in garbage bags and just toss them over board. That was just beginning to [change before the spill]. Our boat was one of the few boats that mashed up our cans, and we would throw the cans overboard. We would make sure that they were in bags and they were going to sink to the bottom.... We kept all the other garbage and we would take it back to town. The impacts of the oil spill sort of woke up everyone to the idea that this is the crown jewel that we live in and we haven't always been treating it as if we really have respect for it.

As evident in the narratives presented here, Cordovans do not simply appreciate their natural surroundings because they do not know anything different. Most of my interviewees have extensively traveled or lived outside for extended periods for a variety of reasons, including attending college and serving in the military. They have experienced other settings and chose to locate themselves and/or their families in Cordova. In many cases, these decisions are based on wanting a lifestyle that includes a close relationship with the natural environments of Prince William Sound and the Copper River Delta.

#### 4.2.1 “Mother Earth and Father Sky:” Alaska Natives’ Relationship to the Natural Environment

Although distinctions between perceptions of non-Natives and Natives were not a primary focus of my study, there were comments regarding a special relationship Alaska Natives have with the natural environment.<sup>5</sup> These emerged particularly with respect to impacts of the EVOS:

We were more thinking about what [the oil] was doing to the water because we called it ‘the day the water died....’ [That] was the day in ’89 ... and [we wondered] how it was going to change our life.... We could always fall back on the land, whatever happened. Whatever they [non-Natives] did, if they tried to cut us off.... Whatever they do to us, you always have the land or the sea. For us it is the sea. This is what you always have to fall back on. It is always there. It is going to take care of.... You take care of it; it will take care of you. It has always been there. It will always be there physically and that is how we feel.... This is your security blanket. You identify with it. That is what you are. Suddenly when part of it dies, that is the worst thing that could happen to you. I guess it would be like if you were a child having your mother die.... Your sense of security and knowing what is going to take care of you in case you get in trouble, it’s gone. That is how it felt.

I’ve always lived off ... gathering, catching fish, cutting wood, trapping, fishing, hunting, [and] guiding hunters. My whole life has been made on the natural resources of this land. I don’t work by the hour or punch a clock or anything (*begins to cry*). I’ve always told my kids ... ‘You’ve got to have respect for the land and one thing that you will always have (*pauses to cry*) is this Native land.’ (*pauses*) That’s what bothers me the most.... That’s the hardest part, that we had an oil spill and we lost our land. That’s it in a nutshell. [Because of the Native Lands being sold] we lost every bit of land that had water access.... All we’ve got is some gravel and glaciers and some land down here at Hartney Bay (*stops crying but voice still has sad tone*).

I asked another Native whether he felt a particular connection to the environment because of his cultural heritage. Although he acknowledged that being an Alaska Native

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<sup>5</sup> Alaska Natives living in Cordova are primarily of Eyak, Aleut, or Tlingit descent.

represented something important to him, he noted that being Native was not a prerequisite for having a respect for the environment:

I have dear friends of mine that aren't Native that are just as Native as I am. It's just that I have the blood and the history that goes back that far. Even though they don't have the blood to say they're Alaska Native, they're just as much Native as I am, because they believe in the land. They take what they need from the land and put back to it. They don't abuse the privilege of living in the environment that we are.

An Alaska Native who served in Vietnam compared his experiences in the military to those he had following the EVOS. Like the previous interviewee, he did not suggest that Natives were the only ones with a connection to Cordova's natural environment. However, he noted feeling a special bond with his surroundings:

R: [My experience with the spill] was worse by far [than my time in Vietnam].

I: What do you think made it worse?

R: The earth ... is always permanent. It is there. For us, as long as it is there, we will be okay.

I: And for 'us,' that means Alaskan Natives?

R: Probably [I said that] because that is what I am, but it could be the same for anybody. I just mean that we have ... a different attachment to [the environment]. As long as it is there ... life is going to be okay. The spill killed it, killed part of it.... It is really difficult to describe. I can say it is like ... your mother getting crippled. She is not the same as before. It is sort of like that. You have lost part of your safety net ... a safety net, or a blanket.... This is your mother so to speak. We always call it [Mother Earth].... In our mind it is the Mother Earth. You have the Father Sky and there is the Mother Earth. It is like she got damaged. It is not just economically you are going to get deprived, but psychologically ... you have lost something, too. I did several tours in 'Nam.... I lost a lot of friends ... but it was nothing like the oil spill 'cause it didn't hit as deep. I know it is hard to believe.

I: I believe it. I am sure that I can't fully understand it like you do.

R: Well, I quite don't understand it either.

The comments of an Alaska Native woman also reflected reservations about solely attributing her connection to the environment to her Native background:

I don't like to get into too much spirituality about "Nativity" because some of that is mumbo jumbo I think. Without a doubt ... there was a different kind of connection because I think I feel it myself. I know you don't have to be Native to feel it. It is just being here, knowing that you are part of ... a generation along a long line of generations.... That you have blood ties. I guess maybe you can translate that to a spiritual tie ... to generations that preceded you, and they all existed in the same place. These are indigenous lands and you are part of that indigenous population. That does give you some strength ... [and] that feels good. You feel sorry for people that don't know what that feels like. That's how I feel about the land around here. Whether that ... [is] because I am Native or not [I don't know].... Because I am indigenous [I] ... feel really invaded because of what happened [with the EVOS]. I felt that same way when they put the terminal there [in Valdez].... When I first started seeing the oil tankers coming through Prince William Sound, I felt the exact same way. I don't know if people really enunciated it then, but I sure did feel like we were [being] invaded. I knew Prince William Sound was no longer our personal space. I always felt that way about it. It was always our personal space, like everyone has their own personal space. For us it was the whole land around us in Prince William Sound and Copper River Delta. [Other areas too, such as] Bering River and Controller Bay ... those were ours personally, not the world's, not the nation's. Those were ours.

Cordovans' narratives generally reflect strong ties to their surroundings, regardless of their cultural background (i.e., Native or non-Native). However, there was a qualitative difference in how Natives articulated their connection to the natural environment. This comes from knowing they are descendants of a heritage that has always relied upon the water and the land for their existence; their cultural roots are deep and they respect traditions of their ancestors. The testimony by the Village Chief of Port Graham Native Village, Walter Meganack, Senior, is eloquent in its description of what this reliance means to his people: "What we value is different. How we see the water and

the land, the plants and the animals is different. What the white man does for sport and recreation and money, we do for life, for the love of our bodies, for the life of our spirit, for the life of our ancient culture” (Levkovitz 1990: 44-5) According to the ecological-symbolic approach, these connections have further influenced the Alaska Native community’s social and psychological responses to the EVOS.

#### 4.3 “God’s Got a Garden:” Subsistence Living in Cordova

The respect people of Cordova have for their surroundings is largely based on nature’s essential role in a subsistence lifestyle, which includes hunting, trapping, fishing, and gathering, as well as sociocultural aspects of these activities. As one Alaska Native woman in her early 50s recalled, “When I was growing up [subsistence] truly was a lifestyle.... My folks didn’t have any other choices to make.... When they talk about subsistence they truly did subsist on the stuff they hunted and fished and gathered.” “Subsistence is part of rural economy, but it has little or no relation to western views of economic value. Subsistence is about eating, but wild foods can’t simply be replaced by a processed substitute. Subsistence is about *kinship* and *social cohesion*, but it is not a ritual or ceremony” (Piper 1993:107, italics added; also see Jorgensen 1990). This notion of social cohesion, especially, alludes to the importance of social capital in a subsistence community like Cordova. Subsistence economies do not convert extracted resources or labor into physical capital, financial capital, or human capital (discussed in Chapter II of this dissertation); subsistence is about relationships.

According to quantitative data collected in 1992, 58.9 percent of Cordovans indicated they participated in subsistence activities; 42.1 percent reported that subsistence

is an important part of life (Picou and Gill 1995b). Of these, 61.6 percent indicated that others brought subsistence foods to their household; 55.0 percent reported they gave subsistence foods to others. More than 21 percent (21.4) of respondents who reported involvement in subsistence activities indicated their participation had decreased since the EVOS. Since the EVOS, 17.3 percent of respondents indicated a decrease in others bringing subsistence foods to them; 18.4 percent reported their giving of subsistence foods to others had declined. Finally, data reveal 19.7 percent of respondents were unable to obtain certain subsistence foods in 1992 as a result of the oil spill.<sup>6</sup>

The following narratives reveal the importance of subsistence activities in Cordova, as well as a continued theme of Cordovans' ties to their natural environment:

My husband is out on a hunting trip right now.... They have been gone for five days. He is with ... four or five other guys. All have families. The other day everybody got at least two deer. That sounds good ... That will be meat in the freezer. We have two freezers. We didn't do a moose hunt this year so we are going to have to get more deer to put up in the freezer.... In the past [he has] done trapping, and it is a subsistence lifestyle that is really important. When you go out into the woods you have a lot of respect for ... the land, the animals, and the sea. I know it sounds corny, but it is like ... a whole code of ethics that I have noticed with him and the people who grew up here. You do take from it. You take what you need. You don't waste what you take. You are very careful to always leave something to carry on ... so it will be there for your kids. You want it there for your kids and your grandkids. You want them to be able to go trap a beaver and learn to skin it, and sell a beaver hide. You want them to be able to go out and catch salmon. You want them to be able to go hunting and put meat on the table.... I am sure to people in the city this either sounds very barbaric or ... kind of corny, but it really is the way that it is here for a lot of families.

I have a great respect for the resources that we have here, and that's something that I learned from my mother. It just kind of blended nicely in with [my husband]. Even though he is a hunter and a fisherman, he has

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<sup>6</sup> For additional information regarding subsistence participation in Cordova see Fall (1990); Fall and Field (1996); Fall and Utermohle (1995).



great respect for the resources, and being part Native has probably also instilled [in him] that you take only what you are going to use.

That's just how we live. We don't buy meat from the grocery store usually, we kill it.... My kids do a lot of the killing of it.... It's just a different lifestyle that people normally don't grasp that unless you've been here, like you, and see how we live. You're in with a pretty good group of people, a really diverse group too, because we all do different things.

[The outdoors was a] major big part in my early family. Even as I grew up, that to me was life.... I consider it [like] ... early Native life. We didn't have money just to run up to Costco or to the store.

This last comment was made by a non-Native who grew up in Cordova but was forced to move outside in the early 1990s due to financial reasons following the EVOS. He articulated his genuine excitement of participating in various subsistence activities in his hometown, and his face began to glow as he said:

As soon as I get done with fishing [in September], then I put my boat away.... The next thing I want to do is come back down and go deer hunting, or I want to go out on the Sound and go trapping because that's what I enjoy.... Other than being with my wife, the next most things that I'd rather do is to be with my children, or the next most important thing is deer hunting.... I *love* to deer hunt. I love to moose hunt.... [Outside] there's so many people ... it's not the same experience.

As Piper (1993) notes, "Subsistence is one of the markers that helps Native people define themselves, but it is neither cosmology nor religion, as western people understand religion and theology" (p. 107). Indeed, for many Cordovans, Natives and non-Natives alike, their appreciation of the area's natural environment from the sea to the mountains and glaciers seems almost spiritual:

You know, God's got a garden. We go the store and grumble and complain. The prices are too high, vegetables look horrible ... but did you know, that God's got a vegetable garden? ... He's provided for us some of the vegetables.... There's wild celery, there's mushrooms, there's many different kinds of greens. I think of dandelions – you can call that spinach – because when I grew up my mom was a forager, so I learned how to

forage for food and then there's the ferns, if you get them at the right time, oh, man they're very tasty. There's all kinds of things in the vegetable department. What about the meat department? He's given us moose, venison, porcupine, beaver, all kinds of animals of the forest and it's there for our asking.... God says, 'It's right here, I provided it for you.' Now, God even took care of the fruit so we can have dessert. There's many different kinds of berries: the salmon berry, the coral berry, the nagoon berry, the high bush cranberry; there's the cloudberry, the huckleberry, all kinds of berries. All we have to do is go and get it. God is so wonderful, He even gave us flowers for our centerpiece for our table. I realize how God has everything in its place. From the animals of the forest to the things of the sea.... God gave us a sea. He gave us fish, crab, calms, pollack, herring, codfish. He's given us all of these things.

The narrative of a long-time resident of Cordova notes elements of social capital involved with activities in nature: "Well, my special memories [of being in Cordova] is being able to go out the road, going hiking, being with friends, going on picnics, sharing the beauty." These acts of sharing suggest ways social capital is generated and maintained in Cordova, by fostering communication and association in a context of the natural environment.

A subsistence lifestyle represents social capital because it relies on associations, networks, norms of reciprocity, and trust among family, extended kinships, friendships, and community. In Cordova, as in other subsistence communities, these abstract notions are manifested in very tangible ways. For example, sharing harvested resources is inherent in a subsistence lifestyle.

I love to go out the road and I get in a berry patch and I forget the time of day. I love to share my berries with my friends that ... can't go out the road, can't do those things that I can do. I love doing it for our nursing home patients, to see the joy that it brings to them when they think about when they were younger and could go out and pick berries.

When I lived here, I hunted 19 days, one year.... I shot 21 deer and 20 of them were bucks.... I hang [the meat], cut it, and then deliver it to people all around town. I give it away. I know the limit's only five or whatever

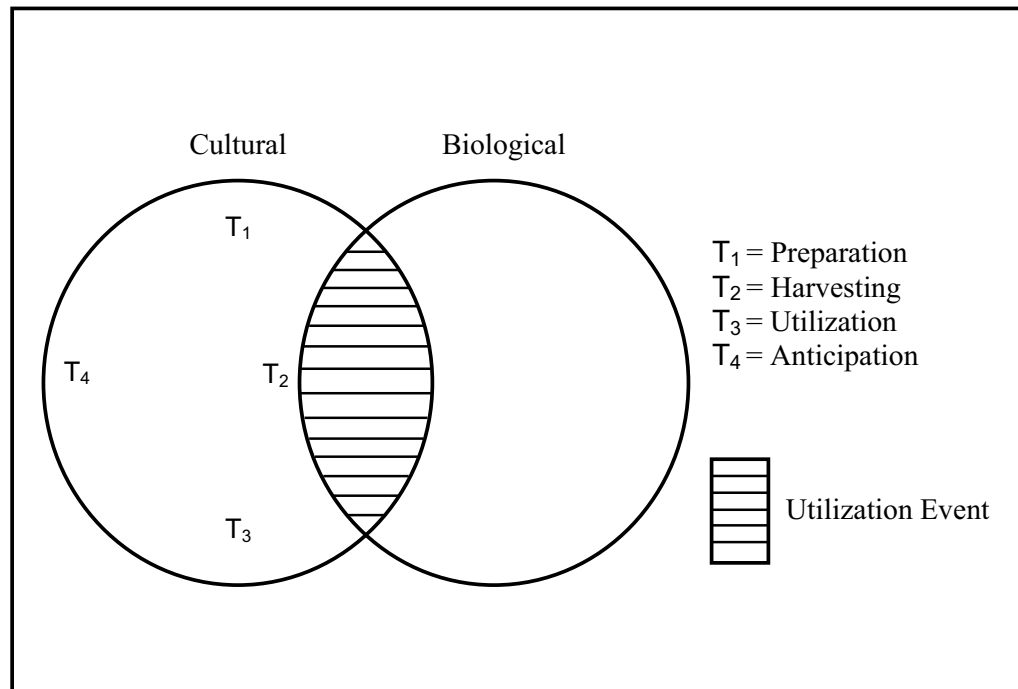
but ... out of those 21 deer, I probably gave 11 of them away and only used what I needed.

Sharing resources as described above nurtures trust, maintains social networks, and reinforces norms of reciprocity.

Notably, commercial fishing in Prince William Sound does not fully capture the essence of a subsistence lifestyle; that is, we should not confuse a lifestyle of commercial fishing with “pure” subsistence processes and cultural facets of these. As the next section suggests, however, participating in fishing for economic reasons often goes hand in hand with other subsistence activities not necessarily translated into monetary value (e.g., gathering berries, hunting, trapping).

#### **4.4 Cultural and Environmental/Biological Cycles**

According to the anticipatory utilization cultural model (Dyer, Gill, and Picou 1992), cultural cycles of Alaska Natives correspond to environmental/biological cycles (See Figure 4.1). In this model, harvest preparation activities, harvesting of resources, utilization of harvested resources, and anticipation of future harvests are represented as  $T_1 - T_4$ . Values, attitudes, and behaviors associated with the anticipatory utilization cultural cycle are culturally transmitted, passed down from generation to generation “through the teaching of skills and lessons of life, story-telling, and other bonding activities” (Gill and Picou 1997:170).



\*Gill and Picou (1997, Figure 10-1:170).

Figure 4.1 – Anticipatory Utilization Cultural Cycle\*

Although in the original anticipatory utilization cultural cycle model (Dyer, Gill, and Picou 1992) preparation is represented by T<sub>1</sub> and anticipation by T<sub>4</sub>, I would argue that the model be revised to label T<sub>1</sub> as “anticipation and preparation” and T<sub>4</sub> being changed to “reflection.” There are several compelling reasons to consider these changes. First, it is difficult to conceptually reconcile a model chronologically ending with anticipation, when the definition of anticipate is “to realize beforehand” or “to expect” or “to foresee and act in advance of” (Stein 1984:58). Second, combining anticipation and preparation more accurately represents how preparatory and anticipatory cultural processes significantly overlap (even more so than other phases overlap). Third, changing T<sub>4</sub> to reflection captures the “spirit” of what takes place at the end of the anticipatory

utilization cultural cycle, as previous harvest and utilization activities are considered. Finally, as originally conceptualized, the model's title suggests anticipation chronologically comes before the other phases, rather than at the end. Figure 4.2 depicts a revised anticipatory utilization cultural cycle.

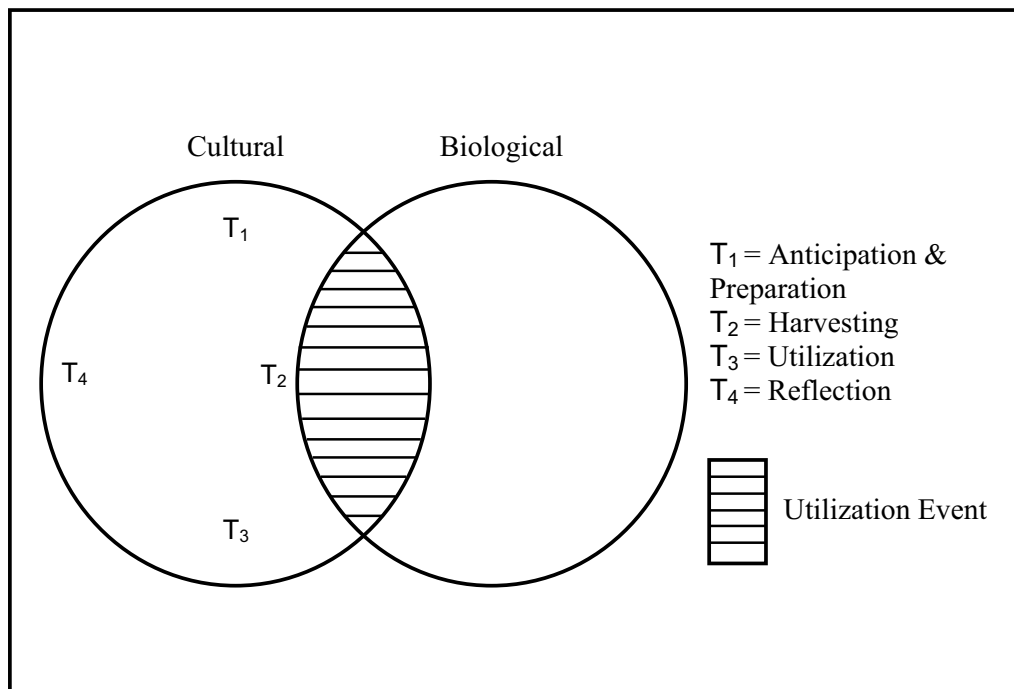


Figure 4.2 – Anticipatory Utilization Cultural Cycle of a Renewable Resource Community

Several other issues must be considered when applying this model. Although it is tempting to conceptualize T<sub>1</sub> - T<sub>4</sub> as corresponding to spring, summer, autumn, and winter, respectively, this is not necessarily the case. Despite the fact that the most visible harvesting activity – commercial fishing – is indeed reflective of the four seasons and T<sub>1</sub> - T<sub>4</sub> in PWS and the Copper River Delta, this is not the sole form of harvesting renewable

natural resources. As an example in hunting,  $T_2$  – harvesting moose – does not take place until fall. Furthermore, although commercial fishing takes place during the months of May through September, subsistence fishing, such as harvesting winter king salmon, occurs during fall and winter months.

It is equally important to bear in mind that different types of subsistence activities may be in different phases of the anticipatory utilization cultural cycle at any given time of year or season. For example, anticipation and preparation ( $T_1$ ) for deer and moose hunting are underway as the silver salmon run is ending ( $T_4$ ). Furthermore, particularly with respect to fishing, there are opportunities for anticipation, preparation, and reflection with each open fishing period. Preparation activities, as the following narrative points out, are ongoing rather than time limited activities:

It's amazing the people that come up and say, 'Well, you only have to work two, 24-hour [periods] in a week – life's easy.' That's not [true], because [there's a lot more to it] ... whether you're cleaning the boat, repairing your boat, fixing your nets ... many, many things in regards to fishing.... You'll spend the whole week from 6:00 a.m. until sometimes 11:00 p.m. doing fishing related stuff whether you're doing the books [or] maintaining the boat.... It's an industry that you really need to have people on it and it's a busy time even though you're fishing only two, 24-hour [periods].

There is considerable overlap among  $T_1$  -  $T_4$  among other subsistence activities, as well. An example of this is berry picking, where harvesting and utilization phases,  $T_2$  and  $T_3$ , are often concurrent.

In Cordova and elsewhere, the anticipatory utilization cycle is reflected among non-Natives, as well as Natives – particularly among commercial fishermen and their families. The following narrative of an Alaska Native and former commercial fisherman indicates an awareness of this cycle:

Everything was annual [when I was fishing]. You never thought of anything monthly, you didn't think of things weekly, you didn't even think of things daily. [For] all my friends I made outside, everything was monthly, monthly payments ... and they planned their [lives that way]. [But] ... we really lived on an annual basis ... according to the fish cycles.

A local businesswoman described how commercial fishing impacts the pace of community life:

[Cordova] has its cycles and with the seasons and the fishing. You have this incredible energy and bustling and all night projects all through the summer and then it goes into sleeping mode in the winter and slows down.... [Then] you see how everybody goes into a family lifestyle in the wintertime. In the summertime it is just a full seven days a week. [Things start to slow down in] late September, first part of October, depends on what aspect of the business you're in. The summer fishermen that come up from Washington or other parts of the state tend to come in middle of May or early part of May, and they tend to start leaving as early as mid-August and [are] pretty much all gone by middle of September. That leaves the fleet to the local people and people who are in other parts of the fishery.... There are still a few cannery workers and [others], but most of your summer transients have taken off by the middle of September.

During my winter interviews, commercial fishermen described springtime in PWS, the time of year when the *Exxon Valdez* struck Bligh Reef. These comments further reinforce the strength and nature of Cordovans' relationships with their environment, as well as their awareness of these relationships.

One of the most wonderful times in the spring is when you go out looking for herring and kelp, and you go out there and it's a silence, a sleepy dead place and all of a sudden it starts the rebirth. You start seeing the animals come in and ... all this stuff starts happening.... Whether it's spiritual or whatever the feelings it gives you, the birth of spring in the Sound is different than any other time on the Sound, and different than any other experience you can have in life. Things like that [are] real hard for anyone else to understand. They measure their lives by Superbowl and tax day.... We have all these natural ties to what time of year it is and a lot of people I don't think could relate.

Springtime is awesome. The birds are here and the weather's really nice sometimes; last spring we had three months of no rain at all, none. It was a

drought. It was really amazing.... The mountains are beautiful with the snow on them ... and the sunshine. Flowers are blooming and the anticipation of the salmon season coming up [is exciting].... Everybody gets excited about that.... Plus, all the babies are being born.... Springtime in Alaska is really cool.

The model in Figure 4.2 provides a framework for presenting narratives that highlight different phases of the anticipatory utilization cultural cycle in the following sections.

#### 4.4.1 “Everybody Has Got Their Blood Pumping:” Anticipation and Preparation – T<sub>1</sub>

Anticipation and preparation involve contemplation, discussion, selection of areas to be harvested, planning, and actively getting ready for the forthcoming season. A former commercial fisherman, now raising children in Cordova, explained the general cycle as she experienced it. Her narrative focused on anticipation and preparation activities:

You kind of relax at the end of the season and you kind of have some fun there for a while.... As soon as January hits you have rounded the corner, you have to start getting ready for the next season.... Before the spill we had herring, and I used to participate in the herring spawn, [the] ... kelp fishery.... There was some crabbing and shrimping during that early season so that meant March you had to be ... physically here getting stuff ready or have a boat ready ... things like that. You really did start looking at it in January [to see] ... if you needed a new engine in your boat or if you needed new gear.... That is what I used to look toward.... Come March your head had to be in fishing and you are organizing, getting stuff shipped up here, financing [everything].... If you are building a boat, then you had a crunch winter because you probably got your financing together in September or October, sometimes as late as November.... [In] January you still had to build the boat.... so you were just putting in 12 to 16 hour days just finishing your boat.

Of course, there are other aspects of anticipating the pending fishing season, as articulated here by a commercial fisherman and lifetime Cordovan in his early 40s:



It is really exciting generally. After a long winter in Alaska ... you are eager for good weather, warm weather, picnics, going out and enjoying the outdoors, especially in a winter when it is raining all the time and you can't go skiing. If you can ski all winter this is a great place to be, but if you are cooped up in the house with wind and rain it gets real boring. The prospect of the upcoming season, you have the Copper River fishery. If you do well you can make so much money.... It is a real exciting time. It lifts everybody's spirits.

Everybody has got their blood pumping. It's like all of the sudden the town wakes up. The hustle and bustle traffic on Main Street [starts up]. The harbor is a rat race, but it's nice. Everybody looks forward to it. You got your hopes up that this is going to be the year that I am actually going to break even and put something away.... Just wait and see.

#### 4.4.2 “Fish to Die; Live to Tell:” Harvesting – T<sub>2</sub>

The harvesting phase of the anticipatory utilization cultural cycle involves applying skills and technologies in processes of gathering natural resources (e.g., hunting, trapping, fishing, gathering flora). Whatever resource is being harvested, harvesting is a time consuming and often labor-intensive activity. People take pride in their harvesting abilities and the prospect of “doing well,” whether they are picking berries, hunting, or commercial fishing. A non-commercial fisherman pointed out:

Most of the fishermen really aren't [in it for the money].... It's a lifestyle rather than a true business.... Where these salmon are going, you can put a reader across the stream, count every single fish that goes up and know exactly what the escapement is, and lock [the fishermen] out. [That] would be a very Vulcan way to catch fish.... There's pride in good fish sense, good boat maintenance, good hard work, you know? Stick-to-itiveness ... really doesn't have that much to do with catching fish. It's just the way you catch the fish.

The following account by a lifetime Cordova resident tells much about the excitement and competitive nature of commercial fishing:

Being in the fishery as long as I have and knowing what I know ... the prospect of doing really well compared to someone else, that is a thrill. You get a thrill out of being the high liner<sup>7</sup> or trying to be the high liner. That is a thrill. Where we fish at is a thrill. The Copper River Flats being the beautiful place it is, not only the beautiful place it is, but also the dangerous place that it is, that is a thrill ride in itself, the danger aspects of it. It is kind of like these thrill seekers, the skiers. There was this one skier here that I met [that] I will never forget. His motto is still on the wall [at the Pro Shop]. 'Ski to die; live to tell.' That is almost how I feel about the Copper River fisheries at times. On a day like today [foggy and raining] if you were out there that is what it would be like. Fish to die; live to tell. If you were in the competitive mode out in the ocean ... it is a very scary process, but it is a thrill. It is something that once it is in you; you don't want to get rid of. You always want it there. It will scare you while you are there, but then you get back home, 'Whoa man.' You don't want to do it, but when it is happening and shortly after it is just so exciting.

Berry picking is a popular subsistence activity about which people fondly speak.

One woman I interviewed apologetically explained her attire as she spoke about picking berries: "These are my berry picking pants.... These are the same pants I wear every year for berry picking. They still have nagoon berries all over them.... I use the same pair because [the juice] doesn't come out of anything." The subject of gathering berries emerged during this particular interview when I inquired about positive aspects of living in Cordova, despite the economic situation being the way it is. She laughed, stating, "We have really good berries." When I probed about whether she had a special spot where she picked, she continued:

Yeah, but I can't tell you where it is .... Somebody actually earlier today was telling me, 'We guard our nagoon berry spots like fishermen guard their fishing holes....' Berry picking ... when it's sunny here [is great]....

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<sup>7</sup> In traditional terms, "high liner" refers to being a top fisherman. As several interviewees noted, another meaning that has emerged since the early 1990s is: "A high liner is a fisherman whose wife has a good job."

It's a great place. If you have a really bad summer where you have rain for like 86 days in a row then it is kind of depressing, which has happened. It is just nice [to go out and pick.] Everybody gets together and everybody has picnics and stuff in the summer on a closure.<sup>8</sup>

Her narrative reveals aspects of this subsistence activity well beyond simply picking berries; there is a social element to it. As previously mentioned, this harvesting activity and subsequent utilization of the berries in social settings fosters social capital. Traditions of berry picking vary, but the following account captures one woman's experiences and cultural rituals associated with various phases of harvesting cranberries:

There are many factions of cranberry pickers that pick together, but they all celebrate.... Cranberry picking for me has probably become my Zen in the Delta. What is it about it? I don't know. [In] late September, October, the leaves are turning; the air is nippy [or] it could be hot. It could be buggy. You are searching around, crawling on your hands and knees looking for these little berries hiding under a leaf.... It's a fall subsistence. It's like your summer is over. You are getting ready for the winter. It's not dark yet. That's probably the only time I take off work to actually go out and will go in early and work my lunch hours to get off at 4:00 to go out and pick berries for two hours before the sun sets.... The first bag I picked I remember spilling [them] on the road. I was so upset.

Her experience of someone showing her how to find berries represents cultural transmission of knowledge that she, in turn, has shared with her own daughter. Her narrative also describes how berry picking signals the end of summer and the beginning of autumn. Getting up to show me berries in her freezer, she continued:

They are smaller than a pea.... The redder the berry, the richer the flavor.... Those of us that are in the know, know the berries aren't as good [if you don't wait until after the first frost]. They need that first frost to get sweet.... They grow on the moss. They grow on the side of tree stumps. They grow on the side of the road. After awhile you get to the point where ... you know where they are. We all have our secret spots now.... We have managed to pick quarts and quarts and quarts of them. Nagoon berries are much harder to find and are much more the elusive berry....

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<sup>8</sup> The term "closure" refers to times when the commercial fishing period is closed.

Part of it's just being out in the Delta. The guys are out hunting or they are out fishing.... Generally it's the girls and dogs that go out. There are some guys that go out that are very avid berry pickers, [too].... You and dogs are crawling around; you are being led away from the road as you find another patch of berries and then there is another one, and another one.... Some people use rakes. I pick by hand because to me it's not how many berries I get, it's the pick. It's just being out in the Delta picking. Sometimes I make products with them. Last year I didn't and still went out and picked more berries because it's what I have to do. There's a group of us that celebrate uniqueness in the berry picking world and every year we ... end up having a group birthday party in the middle of the berry patch.... [We] go out and we'll pick and pick and pick for about four hours and then we will stop and lay out the blanket and out will come the chocolate cake and the quiche and the chicken, sesame chicken, and the champagne, and we will sit out in the Delta for another hour and continue to eat and tell stories and take pictures and toast a beautiful fall day where we are out in ... what could be considered the middle of nowhere, with our dogs and our berries and our girlfriends.

This particular tale of picking berries reveals overlap mentioned earlier between harvest and utilization phases. It also highlights cultural traditions associated with harvesting berries as developed by this woman and her friends.<sup>9</sup>

#### 4.4.3 “You Don't Just Buy it in the Can:” Utilization – T<sub>3</sub>

The utilization phase of subsistence berry picking, as well as hunting, trapping, and fishing, extends into homes and other gathering places of participants, families, and friends. Utilization includes preparation, preservation, conversion of harvested resources to usable products, and consumption or use (Gill and Picou 1997). Processes associated with these various aspects of utilization are an important part of the cultural cycle. Several accounts of utilization are rendered below.

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<sup>9</sup> I was fortunate to have an opportunity to taste her cranberry liqueur, a delightfully deep red, thick, sweet-yet-tart beverage she brought to a social gathering I attended.

I remember when I was little, that [my dad] ... made more [money] trapping that winter than he did fishing and working in the store.... One of the last years that my dad did trap, we took all our mink, all the male mink and made my mom a mink parka. [It had] his wolverine and our mink in it.

There was lots of cool stuff that ... we don't do now because of ... the oil spill.... We used to grab crab pots and just take off early in the morning on the family seine boat and we [would spend] two hours on the water and then we'd go to the beach and dig butter clams and then we'd get done butter clam digging and pick up the crab pots and we would either have king crab or dungeness or whatever we wanted. We'd go home and have a great big clam and crab feast out in the yard. It seems like we don't do that kind of stuff anymore.

One of the women actually has an annual cranberry party ... where you have to bring the recipe [you use]. Cranberries are awesome. You can make cranberry jam.... You can make cranberry daiquiris. You can make cranberry butter, which is like an apple butter .... You can use cranberries with cranberry sauce, cranberry salsa.... There are thousands of things you can do. You don't just buy it in the can. It doesn't come out in can shape.

A Native fisherman told of one utilization tradition no longer possible since the

#### EVOS:

Ever since I can remember ... every year we would go and get a seal.... We would take it to the beach and we would have our traditional *munyuk*. [We would] take the seal and cut the ribs up ... [and] put a stick with a roll of fat from the seal on it and take the guts, clean 'em off and wrap them around there.... After the oil spill that hasn't happened. We have never had that [since]. We would take fish, we would take gumboots, we would take the herring and the herring roe ... and that's what we would traditionally do. They're not out there [anymore]. They are out here in the Copper River Flats but they are not here in Prince William Sound, You just can't find them.... The ones that you do open have lesions, cancer, some kinds of problems inside.... That is something that we would always look forward to, having some kind of official *munyuk* barbeque on the beach.... Seal ... is traditionally ... the biggest part of the meal. [We would also] have saunas ... [but] it is just not there anymore.

Cordova potluck dinners are a popular utilization activity, as related by a woman in her 50s who has lived there for almost 30 years. She described attending her first potluck dinner in Cordova:

‘[So-and-so] is having a cookout, why don’t you come on over?’ So you go over to the cookout. They are having this fantastic meal, and everybody has brought all this great food.... The company is great with ... these great conversations, and playing music. It was just ... this total fabulous experience.... I don’t think I have ever had food that was that good in my whole life. All these sensory things ... are just coming in on you and you are just going ... ‘It is good to be alive. What a wonderful place to be.’ All this stuff is just local, indigenous to the place. The great berries and making salmonberry cobbler.... We had king salmon that night.... That was when [the host] had caught a 74-pound king.... I think that was my first taste of Copper River fish, Copper River king.

#### 4.4.4 “There Weren’t No Pinks and There Weren’t No Price:” Reflection – T<sub>4</sub>

The reflection phase occurs at the end of the anticipatory utilization cycle. Reflection involves thinking about and discussing harvesting activities that have taken place; this often happens during the utilization phase. Reflecting provides opportunities to consider different aspects of T<sub>1</sub>-T<sub>3</sub>, including time spent in nature and with family and friends, and developing strategies for upcoming anticipation and preparation activities. With respect to commercial fishing, reflection often involves a verbal “recap” of harvesting activities, including particularly good or bad fishing periods.

The formal interview data I collected did not provide much information regarding the reflection phase, T<sub>4</sub>, of Figure 4.2. Rather, most of what I learned about this phase with regard to commercial fishing came from personal observations in social settings, especially listening to conversations among fishermen in the fall and winter of 2002-2003. Understandably, in light of what people in Cordova referred to as the relatively poor salmon market prices in the summer of 2002, much of what I heard was not positive. Rather, it revealed negativity about the future of the commercial fishing industry and whether they would be able financially to survive the winter. As I wrote in my journal

(November 5, 2002), a lifetime Cordova resident and commercial fisherman told me it would be a “stitch and bitch” winter – referring to mending nets and griping about the previous fishing season. One morning at breakfast I overheard a fisherman saying of the previous season (2002) “There weren’t no pinks and there weren’t no price. How does that work?” (May 23, 2003).

In part, I believe that some of what I heard was a direct consequence of interacting with people who might not have had the resources or opportunity to spend time outside Cordova during dark winter days. Thus, my data are undoubtedly skewed in this respect. On the other hand, I did have one interviewee who commented that a commercial fishing lifestyle affords opportunities to engage in other pursuits – perhaps generating opportunities for reflection in the bigger picture.

[When I became involved in fishing], it challenged so many things that I previously thought like, ‘Everybody just works 50 weeks a year, takes two weeks vacation, and if you make a lot of money, well, you have a bigger car, bigger house, spend more money.’ I hadn’t really thought about the whole idea of just working long enough to get by and then having a whole bunch of free time. That was a fascinating concept. I realized that seasonal work like fishing could give you the opportunity to have a lot of free time to go hunting, exploring, and I ended up using the time off from fishing [for other things]. The free time has got to be one of the most attractive things about fishing.... I pursued another whole career in my spare time.... Now that I approach old age, fishing declined economically considerably. Permits that I had that were worth seven or eight hundred thousand dollars, you can sell the whole works for under a hundred now, total. My 401K’s become a .401K, basically. But I’ve been semi-retired for 40 years. So what the hell do I worry about, really? Would I have rather worked my ass off and not done it that way or have a ... little more money for my retirement? If I don’t get to travel anymore and I have to live meagerly, I wouldn’t change a whole lot.

The words of an Alaska Native in Ott (1994) are a better indication of thoughts that occur during the reflection phase of the anticipatory utilization cycle for subsistence participants:

It is during the cycles of subsistence that bonding is strengthened and expanded.... It is during these bonding times that our individual value is placed within our community, and we are able to understand what we must do to preserve our lives and live in harmony. (P. 47)

With the types of intimate connection to the natural environment and accompanying cultural cycles described above, it follows that the devastation of the EVOS disrupted subsistence, cultural traditions, and generated collective stress among Cordovans and others living in and relying on PWS for their well-being and livelihood. Arguably, those with “closer” ties to the natural environment (e.g., Native Alaskans, lifetime Cordova residents, and others such as fishermen, hunters, and naturalists who had strong connections to the area’s resources) felt a greater impact from the spill than those without such ties. The following narrative epitomizes this situation:

It was tough. No one loved it the same [as those of us who were really connected to the Sound].... It depends on the depth of your connection to the place. Certainly, the Native villages were more affected than Cordova, because they don’t have much of a cash economy. There’s no grocery stores in the villages. They require clean beaches and clean water and clean air to live, literally. It’s just like the wildlife in a way, not quite as desperate as the wildlife but the next step up as far as humans go. Here in Cordova, we are not quite as connected to the environment of PWS as the Native villages; we are kind of the half way between mainstream America modern culture and Native subsistence life. There’s a lot of Natives here; there’s a lot of sharing that goes on here and we depend on the resource – not necessarily directly, although a lot of what we depend on is direct in the way of sharing, but also from selling what we gather. For those who have a very close connection, we were affected more than people who [did not]. Some people, who had no connections in place, were probably not bothered really much at all. You know, [saying] ‘It’s a terrible thing, but gosh that’s way up there in Alaska. It’s a shame, I feel bad, but really as



far as my life goes, it doesn't affect it very much.' That's that way it is, it's the way people are affected.

#### 4.4.5 "Everything That is Good in Me is Because I Grew Up Here:" Cultural Transmission of a Subsistence Lifestyle in Cordova

Generally speaking, appreciation for nature, the environment, and accompanying cultural cycles are socially transmitted in Cordova. Often, though not always, this occurs in either an immediate or extended family setting. Quantitative data collected in 1992 reveal that 61.8 percent of Cordovans believe it is important for children to learn subsistence practices (Picou and Gill 1995b). One woman in her late 20s related the following to me:

Everything that is good in me is because I grew up here. My family was here. I learned how to respect things, respect the earth, respect other people, respect what's around me, work hard for what you get. It's not, 'Here's the cell phone' off to the mall [on the] weekend.... I fished on my dad's boat ... I worked in [a] cannery. I grew up knowing that everything had a price. That's important to me.

Another interviewee in her late-80s spoke of walking her son to school in Cordova many years ago:

I have often thought I want to move away from here 'cause I like a big city. Yep. I like a big city, but [not] to go and live... I like to go see it. I like to be there awhile. I like to come home. I can't think of another place I would rather be. I know you wouldn't notice it with [my son], but I notice it because I used to walk him to school all the time when he was little because I didn't like him going across [the road].... I would walk along and I would ... say 'Look at that, [son], isn't that beautiful?' He will do that even yet. He will see a pretty sunset and he will notice it where a lot of people wouldn't even pay attention to it, but he seems to always notice. He will mention it to me every now and then. That is because I had pointed out to him when he was little, all the beautiful things we have here.

Concern for the environment is another culturally transmitted notion:

Because I grew up with a mom who was like a Rachel Carson incarnate, I learned conservation. [She re-used] plastic bags from bread. She would never buy plastic bags. I carried that theme right into my own family. We used to have paper that would normally just be wadded up and thrown away. [Now] we just use every ounce of paper we can that can be used again. I really am very close to and concerned about our environment.

Another interviewee spoke about his time in Cordova as a child:

Back then it was just way different. We didn't have TV. I don't remember watching TV until I was in sixth grade.... I think the first TV I saw was in the ... store where my dad worked.... [Instead], you'd listen to the radio all the time... [And we'd have] story time.... They'd tell stories for somebody's birthday. That was pretty cool.

In the Cordova community, cultural transmission of subsistence activities takes place not just within families, but also among friends, as this resident of more than 25 years described: "When I first started [berry picking] I couldn't find a berry if my life depended upon it without the help of my girlfriend.... I can remember not being able to find these and now looking back I wonder why I couldn't find them."

Cultural transmission through formal and informal activities was a common theme among interviewees as they described subsistence activities, various recreational activities, and their accompanying meanings. A non-Native provided this narrative of his recollections of participating in subsistence harvests with his family and how his father taught him skills associated with hunting and trapping:

I shot my first moose with my sister. I was 12. My sister [and I]... We both got drawn [for a moose permit] on this side of the bridge at 27 Mile. I remember my dad taking us out behind this field on Alaganik... At that time, you had to qualify to prove that you could shoot at 75 yards and get five bullets inside a target.... I remember my dad ... took us out for two weeks straight, every day after school [so we could practice].... I got to contribute to what we used to eat – goat, deer, and moose. I shot my first deer October 10<sup>th</sup>, 1969. I grew up deer hunting. I shot my first deer when

I was 10 with my dad. Deer hunting is something that I really enjoy to do. I enjoy it and I found out how to hunt them and how to get them in the woods.... It's a challenge and it's just something I really enjoy. [I was] brought up that way.

His use of the phrase “got to contribute” denotes privileges as well as responsibilities associated with traditions of participating in a subsistence lifestyle. He remembers learning how to trap with his father: “He'd bring us kids out and ... he'd teach us [how to trap]. We'd get the top sets and he'd take the lower ones towards the water.” He went on to tell me about his own trapping activities as he became old enough to work more on his own:

At midnight I'd start setting traps in the dark.... my mom would wake me up at 4:00.... Freshman year [of high school I'd] go out, set my traps.... My schedule would be, 4:00 a.m. up or out the road by 4:00 or quarter to 5:00 we'd be out at 14 [Mile], no matter what the weather. I'd jump out and ... check the traps. [I'd ride in the back of the truck as my mom drove] and check them all the way in.... Sometimes if it was frozen, I could run underneath the bridges.... It was a marathon. You'd get home about 6:30 and then I'd have breakfast. 7:00 was [basketball] practice. Go to practice. Go to school. Go home for lunch. Go back to school. Have [basketball] practice after school. Get home ... start skinning critters. Have dinner.... Homework came first. Then I'd start skinning and I'd get to bed at anywhere between 11:00 and 1:00 in the morning. That's what it ... was like.

An Alaska Native referred to Cordova as the “Best place in the world to grow up. I grew up digging razor clams and commercial fishing.”

Others related different aspects of cultural transmission not necessarily related to subsistence activities, but passing on a love of nature and the outdoors:

I got [kayaks] when my kids were little so [the kids] could learn. We go kayaking a lot; we have a jet boat that we [use to] go down the river. Ever since the kids were little we always took them out rabbit hunting and duck hunting.... [When] I tell people from the big city about the stuff that they do.... People ... have a hard time believing all the stories.... [My son] shot a bear with a bow and arrow when he was 14.

This final narrative of a lifetime Cordovan expresses fond memories of growing up in Cordova, but acknowledges how things have changed now that he is an adult:

It was wonderful [growing up here].... We had the outdoors ... it is a wonderful place. There is so much to do in the outdoors, so growing up was very outdoor related. Still to this day we do those outdoor things, probably not to the ... extent that we used to because you are always trying to make a dollar now.

#### 4.4.6 Personal Observations of the Anticipatory Utilization Cultural Cycle

During my fieldwork I was fortunate to have many opportunities to experience each phase of the anticipatory utilization cultural cycle. On the night of my first visit to Cordova in May 2001 I was invited to a potluck king salmon dinner, this first of several on that trip as well as others. During subsequent visits I observed anticipation and preparation processes for fishing, hunting, and gathering. I spent time with Cordovans in a variety of settings where they discussed and engaged in equipment and boat repairs, engine overhauls, net mending, and grumbled about fishing regulations for the pending season. I was also privy to guarded conversations between fishing partners about where they planned to fish on the first opener of the season. I observed net mending, a tedious yet critical part of what I recognized as the ongoing preparation phase (i.e., throughout the fishing season), as well as cleaning and canning fresh salmon. In the fall, I watched moose and deer meat being processed and I tentatively assisted by wrapping and labeling the various cuts, directed by those around me.

Cordovans graciously shared their bounty with me, though my offerings of Mississippi State University cheese and preparation of an “imported” southern fried catfish meal (complete with cornbread and hushpuppies) seemed weak in comparison.

However, it was clear that utilization – even of catfish – was not simply about eating, but about sharing and connecting with family, friends, neighbors, and community. Each phase of the anticipatory utilization cultural cycle I witnessed and in which I participated represented different forms of social capital, including associations and networking, trust, and norms of reciprocity passed down through cultural transmission from generation to generation, as well as to newcomers to Cordova.

#### **4.5 The Town of Cordova**

The ecological-symbolic perspective and discussion of Cordova as a renewable resource community provide a context to discuss the town's built and social environments before and after the EVOS. When asked what it was like growing up in Cordova or first arriving there, most narratives varied little as people generally described a busier town with more businesses and things to do. Many commented about the town's wooden boardwalks and lack of paved roads, noting there used to be a bowling alley and a movie theatre. Most of the changes in the appearance of Cordova's built environment (e.g., the disappearance of businesses on Main Street) are indicative of a downturn in the town's fishing-based economy since the early 1990s. Many of those with whom I spoke lamented the demise of business in Cordova after the EVOS.

Look at all the places that went out of business.... Rhonda's Hair [shop is] gone.... They moved out of town. Davis Super Food ... gone. We have a Salvation Army on Main Street, what does that tell you? [Where] PWSAC [is located] used to be business[es].... That used to be a liquor store and a sporting goods store, and a commercial hardware store – gone. It's PWSAC now. Three businesses are gone. This is all .... after [the oil spill but] it's not all oil spill related.

With a few important exceptions that will be addressed below, most all interviewees had very positive recollections of Cordova prior to the EVOS between the 1950s through the 1980s. People recounted their impressions of life in Cordova in somewhat nostalgic terms, most of which describe a community that was not only economically sound, but wealthy in social capital as well. The words “trust,” “family,” “giving,” “positive,” “cohesive,” and “close” were frequently used as interviewees responded to questions about community life in Cordova prior to the late 1980s.

Back then it just seemed like we knew everybody in town. Even the fishermen that came up from the Lower 48, they were considered locals really because ... there was no value on [the permits]. Then you could just apply for a permit, until the '70s when it [became] limited entry.... The town was more ... like a family type scenario, [back then].

[In the 1970s] ... the community was great, 'cause everybody pitched in for anything. If somebody was hurt then everybody, they had fundraisers and they really helped out their fellow man. Here, everybody knew everybody. Everybody trusted everybody. Everybody was in unity.... This community was so tight. Everybody loved everybody.... The only time they got in trouble was when they went drinking and had a little disagreement or something ... but the next day they would hug.... It was close out fishing too. [It was] just a very, very different time. The community here was ... more relaxed and [we knew] that we had a place in society or in the world. It was a special place and people were very giving.... You left your door unlocked. You never locked it. Anybody could come into your house and it didn't matter. It was just pretty much like that. It was non-aggressive. People worked hard.

It was a real positive, real together community [when I was growing up here].... You were never worried about crime.... You were never worried about what your kids are doing, 'cause if you don't know where your kids are, somebody else knows where your kids are and that always means somebody's watching 'em. [That was] a good feeling.... [It was a] ... real strong fishing community.... Growing up was real positive. Everybody pulled together.

It was a close-knit community.... There was a lot of different activities. I was in a bowling league.... we went ice-skating and hiking and did all the fun things in Cordova.... It was really fun. There was always something

going on growing up here ... skiing, hiking.... We did a lot of picnicking and we had a boat ... and we went out in the water, even though my dad didn't make his living on the water. He wasn't a fisherman but ... we still went out there. Unlike [my husband] and his family... they were basically born out there (*laughing*).

We didn't have to worry about going out and getting mugged.... It was just peaceful growing up.

It was neat [growing up in Cordova].... We'd run around the lake until midnight in the summers and go to bed ... and we'd get up at 5:00 and be running around in the woods, building forts.... Life was good, having picnics on the lake, down on the beach in front of our house and we always used to have time for family. We'd go out the road and play baseball, and have picnics when it was a nice day and there wasn't a fishing opener in the summer. The family was really strong for me.... It meant a lot to me.

Things seemed to be somewhat simpler [in Cordova than where I came from in the Lower 48]. People were more trusting in many ways.

Everybody knew everybody then. That is when the community was a real fishing community. It's still a fishing community but it's nowhere near what it was in the '60s and '70s.

When I asked one female commercial fisherman what it was like growing up in Cordova, she stated: "I've been here most of my life. You've seen old westerns? That's exactly what Cordova was like. The bars were open 24 hours a day, 7 days a week, 365 days a year." Other narratives confirm this theme of a "wilder" but still safe Cordova.

At that time, back in the early '80s [Cordova] was a little wild, a little bit wilder than it is now.

My first impressions were, this is a town out of the Old West. Main Street was not paved, gravel road, wooden sidewalks and very different, very, very different. This is a pretty far cry from a big city. I grew up in [the east], right on the outskirts of [a big city].

It was a bit wilder town then, than it is now. [It was] more of a fish camp, lots of transient people passing through. [There were] many more bars. People would line up cocaine on the table ... in the bars at night. It was a pretty wild place. [There was] lots of money floating around in the fishery,

lots of money. Lots of people ... were basically leaves in the wind.... They were making lots of money and they were spending lots of money.... Aside from that, it being kind of a wild place [before the spill], with some transient people, the community itself was very cohesive.

I loved the town [when I first came here]. The town was just totally happening.... It was just red hot.... [There was a] nice clothing store and a big bar where Davis's [Grocery], which is now out of business, used to be. There was the Club Bar, and then there was another bar out of town called the Black Sheep. It was just happening. People were making big money. Crab season was good; people were working in the winter there, and ... I had seasons where I made \$25,000 to \$28,000 crew shares for six weeks. It was pretty exciting times, [a] lot of fun. On the whole, Cordova was really nice. I liked it.

It was a bubbly little town in the wintertime in [the '70s] because there was a tender crab season.... The bar scene was much more lively than it is today. They would bring in bands on the weekends, even in the winters, [but] there would be some down periods when things were slower.

You could have four bands going in four different bars and every bar was packed.... Everything was insane when I first got here. This place was packed. There were bands in here; there were bands in the Club Bar. [There were] four cocktail waitresses in the Club Bar and two bartenders, two bartenders in here, three cocktail waitresses. Powder House had a band playing and that was four or five cocktail waitresses and at least two bartenders ... all making real good money. The Anchor would have musicians ... and it would be just wall-to-wall people. I had \$1,500 day shifts in there.... It was insane. Now you are lucky if you have a \$300 day shift.

According to every account I heard, the social environment of Cordova changes during different times of the year. It follows that this influences how social capital is manifested in the community. Cordova has always experienced seasonal population changes, with many cannery workers, commercial fishermen, and their families spending time outside Cordova during winter months. Despite "normal" seasonal cycles, it is apparent that a number of families have left the community for financial reasons. One interviewee maintained, "This winter alone I think there was six or seven families that



left town that had been long-time residents, and it has been probably four or five a year. It might even be higher than that.”

Local perspectives vary, with some interviewees seeming to take changes in stride, if not downplaying concerns of others regarding families leaving the community:

People come; people go. There’s ingress and egress just like anywhere else. It is probably a little less here than a lot of places. There are a lot of old families here.... It’s nice, you know?... It’s kind of interesting. It is kind of like you got your resident wildlife species and you have your seasonal residents. They don’t actually just come up to breed, but they come up pretty much for the same reason. The reason the birds come up here to breed is that there is an abundance of resources. Getting bugs is easy [for the birds] in the summertime up here. Feeding your chicks and having an opportunity to make a living for your family is much better – using your seasonal strategies to increase your success, your survival rate. That’s the same thing with the seasonal people, too. Some of the birds live here all year around and some of the same birds come back and they come back to exactly the same places, it’s amazing. We don’t have that much in the way of transient people. We have a lot of seasonal people. Those same people come back year after year. Some people have dual homes.... Even though [Cordova] is smaller than a college campus, there’s a lot less turnover here than at a college campus ... and the return rate of the people that are seasonal is [high].... [They come] year after year after year.

[Cordova is] just full of real active doer kind of people.... and [in] a lot of ways it’s really just like a duck marsh.... There’s a certain part of the population that’s resident and there’s another portion that leaves and they go off and they have these adventures. They have a house in Mexico for the winter. They go traveling or they go somewhere else and they come back with these fantastic stories.... Besides just the incredible grandeur of this place and the isolation – not having a road – has made this place [what it is].... [Not having a road] does the same things sociologically that it does biologically, I think. It allows for the individual uniqueness to not be just kind of ‘averaged out.’

The following narrative offers one woman’s perspective on how social cycles in Cordova correspond to commercial fishing season. She describes what spring in Cordova was like when there was a herring season; her account once again reinforces an

ecological-symbolic approach to understanding ties between social and natural environments:

It was just wonderful.... People were just coming alive.... It just was kind of a magic time of year really. Everyone would come back to town and we would all get together. It would just be this big influx of people and big influx of boats.... Within a couple of days ... the harbor would just be [full].... You would have 10 or 12 big giant boats that couldn't get into the harbor anchored out. And there is all kinds of people in town. And the divers would come in. The processors would come in ... just this big influx. And the town would just come alive. There would just be people that you hadn't seen since last year 'cause ... they'd only come up here for herring seining. Then they would go on and do the other fisheries throughout Alaska.... So there [was] ... just this big migration up the coast. Now in March and February there's just nothing, nothing.... God, it was so much fun. It was just energetic. It is just the coolest thing. It is really exciting ... when you get that big influx. I call it 'herring fuck energy' because the herring come up and spawn.... It would just be that real exciting kind of ... energy.... It is kind of hard to describe it, but you would get all these virile men ... in town. And the women would just be going, 'Look at those guys. They are so cute.' Everyone would be getting together and going off and spawning. Really. I am not kidding you. And there would be all this influx of ... these alive, virile, vibrant people.... It is like the gold rush or something. We are here to make money. But also at the same time we just had a great time and the town would come alive. We would get cash, much needed cash. We just had fun. It was just fun, fun, fun, fun, fun. And that is just gone ... that spring fling.... [It] just ... gets in your blood.

Another woman had this to say about how springtime in Cordova had changed since the 1980s and early 1990s:

It is not [the same anymore].... [Everyone would] get ready for herring season. Everyone would be here in March, and I mean everybody. Now all the gill netters, they don't show up until sometimes the day before it opens.... We [used to have] ... a whole two and a half month period of everybody running around like crazy.... The only chance they have to make money is just this one time now, so they are not necessarily excited. They are worried that if they don't make it during this one little short period of time, then they are done for.... It's still exciting. It is nice everyone coming back and everything, but ... it is not overwhelming like it used to be.

Cordovans' perceptions of their community prior to the EVOS are an important part of their daily realities. Although some – particularly outsiders – might suggest recollections presented in these narratives are somewhat nostalgic, even “romanticized,” from a narrative constructionist perspective this is of little consequence. Arguably, life in Cordova would have changed even without the oil spill, just as it has in many small towns across the United States since 1989. However, referring once again to the ecological-symbolic perspective and the fact that Cordova is an RRC, negative impacts of the EVOS are very tangible.

#### 4.5.1 “Know the Rules:” Growing Up and Living as an Alaska Native in Cordova Pre-1970

Based on information obtained during interviews, not everyone shared the same positive experiences as a youth in Cordova. Similar to Native Americans in the Lower 48, Alaska Natives encountered considerable prejudice and poor treatment. Several interviewees recalled painful experiences with prejudice – both in Cordova and elsewhere – though none seemed to dwell on this aspect of their lives. An Alaska Native in his late 50s understood “the rules” of growing up Native in Cordova:

We were accepted as long as we acted white. Act white, talk white, then you are okay.... But if you didn't, of course you were not accepted by anyone. We grew up like the few Natives in the town. Probably about 10 to 12 percent of the population was Native.... At that time ... [Natives] could own property [outside the city limits].... We weren't allowed to own property in town.... It was a little different for us. We got along fine as long as we understood the rules. Don't speak Aleutic. Don't act Native. Know your place. Know what you can do and what you can't do. Stay within your limitations that they placed on you and don't push them. As long as you know your place you are okay. That is the way it was. We lived most of our lives growing up out of town.... We couldn't go to the

bank and borrow money.... There was a lot of things you couldn't do. You got the leftovers that the citizens didn't want. The non-Native would go down to the bank and buy a net. Then when they were through with their nets they would just dump them on the beach somewhere. We would go down and salvage what they threw away. That was our nets. That is how we [lived]... That's the way it was. But times have changed.

When I asked about how he learned "the rules," he replied:

You learn the rules from just watching other people; you know what the rules are. As you grew up you understand why they have these rules, and you accept them because that is the way things are. You can't change them because the government would never back this up.

Another man in his 40s recounted that he was not told until he was in his mid-teens that he was part Native; he did not look Native and his parents were trying to "protect" him. He has since embraced his Native heritage. As the following narrative describes, the "protection" afforded this Alaska Native was not available to everyone:

I went to high school, and every year they would have career day. They would take us out of the rooms. They would take about 10 or 12 of us in the school here at Cordova High School that were Native. They would take us out of the rooms and take us down and lock us in a room by ourselves.... You didn't ever talk back to the principal ... you just didn't, but I would get pretty frustrated. By the time I was a senior I stood up and asked him ... why we were not being allowed to learn something about going to college. He said, 'That is between you and the BIA [Bureau of Indian Affairs],' and that was it. He walked out and locked the door. So we never got the opportunity to learn. I know it sounds lame I suppose ... but [this was] a little fishing town up in the middle of nowhere in Alaska. Cordova was a lot different than it is today ... far different than it is now. So we just went on being ignorant [for a long time].

One Alaska Native woman who clearly loves the community and is a year-round resident recounted her early years in Cordova. She described her family as "poor" when she was growing up and referred to different "strata" in the community. She enjoyed her involvement in commercial fishing because it afforded her independence and provided an income. She reflected on her perceptions at the time:

When I was growing up [fishing] truly was a lifestyle ... and being a fisherman or from a fishing family or even from a Native [family] you were really the lowest caste in the society and the 'muckety mucks' were probably the people who owned businesses up town which was kind of funny when I look back on it now. They weren't that well off either but we thought that and they were people who joined the Elks and the Mason's and all these other fraternal organizations and had the balls and the long gowns and stuff.... That's what I like about Cordova now. I don't think we have those strata. The [Cordova] I grew up in had real social strata and I don't know if that was something that existed because of the time [period] and isolation.... Cordova was definitely more isolated in those days than it is now. There were real social strata and there were a lot of anti-Native sentiments. My memories of it were [that there was] ... a real large nonresident fishing fleet.

For one man in his mid-50s, it was not until he attended school in the Lower 48 that he realized he was "different."

[I] learned about prejudice stuff down there. I was in first grade, I guess.... I remember a black kid came to school and all the kids started teasing him. [My babysitter] said, 'Well now you got somebody to talk to' (*laughing*). That's kind of when I first started realizing about [prejudice].

Another gentleman in his 70s almost nonchalantly noted that, as a Native, he was not allowed membership in the Moose Lodge or Elks Lodge for many years. His narrative spans several decades of experiences in Cordova and elsewhere, including time in the military:

They used to have a Native school here in the regular school up here. Since my dad was [not Native] they said, 'You are not going to the Native school, you are going to white school.' The first class my brother and I went to we had to fight the whole class. The class didn't want us in there. They were kicking us out. We got a couple of sticks and everybody came out on the playground. After we beat them up they didn't bother us anymore. But there was a lot of discrimination down here. The local theater we used to have, you had a section set out for Natives to sit. You were not supposed to sit any other place but there. The Lodges like Elks and Moose, they wouldn't accept anybody who had Native blood in them. Pioneers of Alaska, they invited my dad to join. They told him that he could join the club, but ... his wife and kids couldn't come up there because they were part Native.... He didn't join. He ... told them what

they could do with their club. WWII we had a [Native] friend of ours [who] ... was one of the first kids from high school to be drafted. He [served in WWII] ... for four years [and] ... when he came back ... to most everybody he was a war hero.... They had big dinners for him and everything else. When ... he put an application in to join the Moose he was black balled.... I don't know when the organization started changing, but it had to be maybe in the '50s I guess, right after the war. I joined the Moose almost 62 years ago.... I was thinking the other day down at the Elks [Lodge] ... these people [who were] Natives had their 50<sup>th</sup> anniversary down there. Those old Elks would have turned over in their grave if they had seen that. Same as the Masonic... A Native couldn't get in the door up there ... but now the place is rented by the Eyak Village.

This man's son had heard stories related by his father and also gave his perspective on the subject:

So they put them in the first grade and by the end of the first day my dad and my uncle had to get some big sticks and beat the whole living shit out of the rest of the first grade class. After that they didn't have too much of a problem. But, there was a lot of prejudice, and in my day, growing up you still saw it, but not as bad as what they had to deal with. I don't know why, [I guess] (*small laugh*) just knowing people and probably just treating them the way I want to be treated. [I showed them] respect until they showed disrespect, and [then] I took care of that problem. Then I gained respect that way.

An Alaska Native in her 80s who grew up in another part of Alaska recalled:

[I] didn't know there was such feelings against the Native people. It just never was anything I ran up against, until I moved back here. That was the biggest shock I think I had in my life when I realized they discriminated against us. It was a real hard thing.

Her husband commented, "At least they don't have those signs at some of the bars in Anchorage [like] when I was in the army. Went into town and there would be a sign 'no dogs or Indians allowed.'" He went on, "Yeah, that was written in the bar. So here I was in the army, and I couldn't even go into a bar."

Thankfully, none of the Alaska Natives I spoke with who were younger – under 40, or in their early 40s – had encountered such challenges with being Native. Or, if they

had, they did not share these experiences with me. Rather, their narratives denoted pride in being able to express their “Nativeness.” Said one young Alaska Native woman, “I think it’s pretty cool knowing that some of my family was chiefs or storytellers of the villages.... I think it’s really cool. Pretty neat to have that kind of heritage.” Another in her late 20s had this to say:

When I was old enough to start taking SAT’s and classify myself [by] ... my ethnicity and my background, I always checked both..... I’m white and I’m Native, and if I don’t take pride in that then my [kids] can’t. There’s obviously great benefits that come with it because we get free medical here and a lot more doors [are opened for us] as far as grants and things like that. Business loans are opened up to me because of it, and so of course that’s always great. But, we’re part of a heritage that is sort of disappearing and so to say I don’t look Native so I’m not Native is kind of pointless, because everybody is a little bit of everything now a days. I don’t take too much stock in where I come from as far as bloodlines go because who can ever be sure? I know you can trace it back on my dad’s side..... I take a lot of pride in it, and I’m instilling a lot more pride in my [children] than my dad ever did in me because he kind of grew up like [being Native] was shameful thing. I take a lot of pride in it.

When I asked how she was instilling Native pride in her children, she continued:

They understand they are Native American and the villages that were here ... and [I talk to them about holidays] like Thanksgiving and Columbus Day.... I don’t make any bones about telling [my daughter] what I think about Columbus, or what we truly celebrate Thanksgiving for. We don’t celebrate the fact that pilgrims came over, we celebrate the fact that we are family and it’s something to be thankful for, that you are with your family and you are healthy and happy. ... I do little things like that. I take them to Native dances and things like that.

The narratives of young and old Alaska Natives represent far different experiences than their non-Native counterparts living in Cordova. Thus, their social construction of reality is understandably unlike those of non-Native heritage. These perspectives provide important context for the recent resurgence of the Native Village of

Eyak and social capital among the Native population of Cordova, which are discussed in Chapter VII of this dissertation.

#### **4.6 General Aspects of Social Capital in Cordova**

Studies of social capital employ several key quantitative measures to determine levels of social capital in a community (e.g., see McGillivray and Walker 2000). Among these are indicators such as:

- My neighbors in my street or block look out for each other.
- I feel safe out and about in my community.
- Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?
- I am proud of this area.
- This is a good place to live.

Data collected in Cordova in 1991 and 1992 (Picou and Gill 1995b) reflect aspects of social capital in the community following the EVOS (See Table 4.1). In 1991, almost 64 percent (63.6) indicated the quality of life in Cordova is “very good” (11.4 percent) or “good” (52.2 percent); 26.3 percent reported they thought the quality of life in Cordova was “fair.” Only 9 percent indicated they believed life in Cordova was “poor”



Table 4.1 – 1991-1992 EVOS Social Impact Items Reflecting Social Capital\*

<u>Statement</u>	<u>1991</u> (% agreeing)	<u>1992</u> (% agreeing)
This community is a great place to live.	-**	71.1
This community has just about everything that is needed for a happy life.	-	48.7
This community is a safe place to live.	92.1	-
This community is a good place to raise children.	88.6	80.3
This community is a good place to raise teenagers.	52.6	-
Residents of this community get along well with each other.	65.4	-
There are few dependable ties between people anymore.	71.1	-
Residents of Cordova look for new solutions rather than being satisfied with the way things are.	35.1	-
People want to work together to get things done in this community.	42.1	-
Not much can be said for this community.	7.0	-
This community has good leaders.	14.0	-
The future of the Cordova community looks bright.	14.5	-
People who live around here are quite helpful.	-	82.2
Overall Cordova has returned to normal.	26.8	-
Since the oil spill this community has become better.	2.6	-
People in this community are basically the same as they used to be before the spill.	-	34.9
I have become more active in participating in community affairs since the oil spill.	-	26.3

\*Picou and Gill (1995b); percentage agreeing includes respondents who “agreed” or “strongly agreed” with the statements.

\*\*Not asked.

(7.9 percent) or “very poor” (.9 percent). These indicators help to frame comments made in previous sections of this chapter and suggest thematic directions for further discussion in this and later chapters.

#### 4.6.1 “A Real Safe Place to Live:” Cordova

Interview participants frequently commented on feeling safe in the Cordova community, demonstrating trust in their fellow residents in very tangible ways such as not locking doors to their homes or vehicles, or leaving their keys in the ignition. The following quotes suggest social capital in this form remains fairly high in Cordova.

It’s lovely. The community is small. You know everybody. There’s all the privilege to your life, but there is certainly no anonymity. We don’t have a key to our home, because the people we bought it from didn’t have one. We don’t lock our cars here in Cordova; we leave the key in the ignition in case somebody needs to move it. There hasn’t been a homicide here in over 25 years. If your dog gets lost, the taxi driver picks her up and brings her home.

It’s safe [here].... There’s only so many people and you can’t drive out of town. So really your risk is limited for ... murder and things like that. I think the last murder was [in] 1972.

If somebody borrows your car you are going to find it up on Second Street with the keys still in it. You ... leave your house unlocked and it’s pretty much a real safe place to live.

Articulating “feeling safe” in Cordova was especially common among women with whom I spoke:

I don’t think there is very many places in the United States where I would feel comfortable at 11:00 or 12:00 at night walking down a dock, and here I have no problem. If I need to go get something off the boat I go down to the dock by myself and get something off the boat.... You don’t even think about it being a problem.

Of Cordovans surveyed in 1991, 92.1 percent “agreed” or “strongly agreed” with the statement, “This community is a safe place to live” (Picou and Gill 1995d). To a great extent, feeling safe and being able to trust one’s neighbors represents ontological security. As discussed in Chapter VI, this is essential – perhaps even a prerequisite – for social capital.

#### 4.6.2 “We’re So Lucky to Raise Our Kids Here:” Raising Children in Cordova

Cordova being a “safe place” is a primary reason cited by parents I interviewed for remaining in or returning to the community. Their narratives about Cordova being a positive place to raise children reflect elements of social capital.

[My wife] and I have this discussion all the time and we both feel that we wouldn’t want to raise our kids anywhere but Cordova. I struggle within myself how I can support my family with the fishing industry sliding on a downhill ... and plus with my dealings at [my other job] also sliding on a downhill. I’m looking into the future a little bit because [my son is] still going to be in school for [several] more years; [my daughter is] leaving in [a couple years]; our older [children] are in college already.... I think I’m in the most perfect [place] and we’re so lucky to raise our kids here.... I don’t have to tell you nothing. You know.... The kids can run around at a baseball game or a basketball game or ride their bikes around town and nobody’s going to steal them.... What’s cool about it is the Girl Scouts go around selling cookies and everybody’s doing fundraisers. Everybody’s willing to give \$5.00 here or \$10.00 there to support this group or that group or that group and you see these little girls selling cookies or whatever they’re doing to support a good cause. If you go to the big city you don’t have that closeness of that.

I have always loved it here.... Of course growing up I didn’t. I hated it. I was a teenager hating the world. [I claimed I would] never raise my kids here, [that I was] never coming back here. Then I got kids and realized that ... this in an ideal place to raise your family because you can take them outside [Cordova] to travel and see things that they are not exposed to here, but they kind of have this safe little environment to be kids in. If they don’t come home the next day, it is a series of phone calls to find out where they are at. It is a lot safer than wondering if they are in Jersey.

I like the lifestyle of raising kids here. I think that kids and adults both miss out on a lot by living in a small community, but I also think they gain a lot by living in a small community.... We can jump in my truck and hook up our trailer to the four-wheelers and drive out the road and they can go drive around and do things just down the road a couple of miles. Granted, the kids here miss out on school activities, which this small school does not have by not having football, or track and field, baseball. They do miss out on some things like that, but I believe the way of living here is very safe. Sometimes I think it is too sheltered.... I try to push my kids a little more into opening up into the real world. I am pretty straightforward as far as that goes. I don't overprotect them like I think a lot of parents do. I like the fact that I can take my boys hunting by jumping in the river skiff or jumping in the truck and go out in the road or crossing the bay. It is just right here. You can't do that in the city.

The biggest advantage [of raising kids here] is they are pretty safe from any violence. You can let your kids walk to the grocery store from the house or walk to the school.... Every once in a while there is someone that you are not so sure about in town but there are no shootings or anything like that.... I like the small town. I like to be able to ... have a place where almost everybody that comes in, I know and ... have conversation with. I like it because it is safe. I don't have to worry about my kids.

I like the fact that I don't have to worry about my kids after school, how they are going to get home. For the most part it is a very trusting community.

I really appreciate the fact that my kids got to live here ... as opposed to being ... in a big school in a big city and worrying about guns and having metal detectors. Our kids didn't have to worry about that. The [financial] price that we pay for living here is well worth [it].

Narratives about raising children and teenagers in Cordova appear to reflect quantitative data gathered in 1991 and 1992. As presented in Table 4.1, a strong majority of Cordovans (88.6 percent in 1991 and 80.3 percent in 1992) indicated that the community is a good place to raise children (Picou and Gill 1995b). Fewer respondents, though still more than half (52.6 percent in 1991), reported that Cordova is a good place to raise teenagers.

A number of parents cited the quality of education as an advantage of living in Cordova.

They have a great education system [here]. They really do. They provide so much ... compared to the other places in the state. We spend a little over \$4,000 on each student and that's it for the whole year, which is not very much compared to Anchorage or anywhere else. We just have a lot of great kids come out of here and get scholarships to Stanford and American University in Washington D.C. ... all over the place.... They do really well, really well. From the kids that come in here from the Coast Guard, they come in because they are usually moving around all over, Cordova has picked up so many kids that are first grade reading level and brought them up to level. [Our teachers] brought them up with just special one on one work.... I'm really all pro-Cordova school.... Our school system here is really, really good.... We have a lot of ... national honor students, about 10 every year from Cordova.

[Our education system is] good. The grade school is well above average ... for the United States. Our grade school, how do I say this? The numbers [test scores] that we put out, our kids are well ahead of where they should be comparatively. [Our] high school kids are right at average. They could be higher. They should be higher, and we are working toward getting higher. The school system here is good. It really is. I would say [we have] a very good administrative setup. The superintendent I believe is doing a very sufficient job. The administrators in both schools are good. The high school administrator is real good. We are a little down with the kids as far as the numbers go, and I believe that's because families are pulling out of here because they can't afford to live here anymore. We are seeing that more and more. Unfortunately we are down again this year and I don't know exactly what the number is, but I know we are down.

Again, quantitative data seem to support previous narratives regarding quality of the local public schools. In 1991, 69.7 percent of respondents indicated the quality of Cordova public schools was “good” or “very good;” the remaining respondents described them as “fair” (20.6 percent), “poor” (4.4 percent), or “very poor” (1.3 percent) (Picou and Gill 1995b).

Despite limitations in diversity of athletics (e.g., no track and field, baseball, or football) in Cordova schools, sports represent an important part of life for youth and

adults in the community. Involvement in athletics at the varsity level generally means extensive travel to compete, as this parent commented: “We ... traveled a lot because [our kids] were into sports. They were into judo and wrestling and basketball, so if you are in school and in one of those sports you could travel all over the state.” Community enthusiasm for athletics was very apparent during my time in Cordova. Basketball and volleyball are especially popular, likely because they are indoor activities not hampered by rain or other inclement weather and also because they take place outside of commercial fishing season. Men also participate in basketball; there are at least two tournaments held at Bidarki Community Center during the year, one of which takes place during the Iceworm festival. These draw a number of fans of all ages.

I had several opportunities to attend athletic events and witnessed the excitement in the Cordova High School gymnasium when the girls’ varsity volleyball team beat Valdez in a close match to win a regional tournament.<sup>10</sup> When there are away games, dedicated athletes and committed supporters who can afford the time and have resources to do so board the ferry and travel for hours to compete or watch. Scores of away games are frequently broadcast over the radio and when they are not, a sort of informal “phone tree” develops to pass along results. Communication of this type is further evidence of social capital in Cordova. When there is association at this level, trust and additional communication are fostered. Furthermore, involvement in community activities is suggestive of social capital.

One parent laughed when I asked her about raising children in Cordova and said, “Everybody knows everybody.... If [your kids] misbehave, you know about it 10 minutes

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<sup>10</sup> Cordovans’ refer to their teams as “boys” and “girls.”

later.” I joked with her, “So maybe I should ask the kids if Cordova is a good place to be raised?” One of the most telling narratives about raising children in Cordova was the following by a father of two who did not grow up in the community:

I’ve been to a bunch of graduations and every year one of the valedictorians will ... say that Cordova is a wonderful place to grow up, but, the only bummer is that there are too damned many parents here.... We have a real strong sense of community here and the kids are our children. So many, many adults have relationships with lots of kids that are outside their immediate family. The kids have a hard time getting away with [anything], or going astray.... If they are your kids and you don’t catch them, your neighbor might and ... bring them back to the path. There’s no malls and places ... that seem to promote some of the ideas and habits that I think a lot of us parents would like our kids to avoid. Here, my daughter after school goes out and goes duck hunting with her boyfriend and that’s a little different than a kid in suburbia who goes to the mall and hangs out.

#### 4.6.3 “When You Want Something Done People Come Out of the Woodwork and They Do It:” Community Involvement in Cordova

Another indicator of social capital cited in research literature is voluntary participation in community, church, and work based organizations. Civic engagement is evident in several narratives of those I interviewed, though in hindsight was not a topic I formally pursued to the degree warranted. Offsetting this limitation, much of the data gathered during my participant observation activities addressed this aspect of social capital in Cordova. The Iceworm Festival, Village of Eyak Sobriety Celebration, Fish Prom, and regular events held at the Moose and Elk Lodges such as weekly dinners, dart tournaments, and silent auctions generated strong turnout by locals, offering considerable opportunities for interaction and association. For example, most of my own experience was with the Moose Lodge that hosts a well attended steak dinner each Friday night, as

well as weekly taco dinners and Magic tournaments on Sunday afternoons for Cordova's youth.<sup>11</sup> Moreover, as one interviewee pointed out, Cordova's fire department and a number of emergency medical technicians are volunteer based.

The data I did obtain during interviews most often referred to community fundraising activities. As in many small communities, volunteerism is an important aspect of life in Cordova. A number of people commented on this.

When you want something done people come out of the woodwork and they do it. There's a lot of volunteers who are never ever seen, and here I know in the school system there's work you can do at your home ... doing all sorts of stuff ... cutting things out, like in the lower grades. If you want to help you can take it home and do it. You don't have to be out in the public eye where they're seen ... which is really good. There's a lot of volunteers ... a lot of volunteers. Our whole fire department is volunteer. EMT is volunteer, and we have some good quality people in here.

One young woman in her 20s reflected on what it was like when she was in high school:

When you were donating for schools and stuff you could always count on fishermen to help if you needed to raise money for going on a trip, or raise money for sports or anything. There was always a guarantee that [you would find the funding].

Although a couple of interviewees suggested volunteerism and levels of fundraising had declined in Cordova – perhaps indicating diminished social capital – other interviewees disagreed:

I am positive it has never changed. We may argue amongst ourselves, but if somebody needs help in the town we will have fundraisers. Even if we don't have money we always come up with it. It seems like causes always bring us together, and then we kind of forget and go back to the arguing sometimes.

No, I wouldn't say so. I would say there are just as many fundraisers and things like that done now as there was then.

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<sup>11</sup> Magic is a card/fantasy game.



The kids go out and fundraise over \$100,000 a year ... the kids! That goes for the expenses of the ball teams traveling and that. [The School Board only gives] ... the boys' basketball team ... \$6,000 a year. Now, that may not seem like very much but many of them, they fly ... or they go on the ferry. That [\$6,000] goes on the travel. That's right there and anything above that, they have to raise on their own.... They do basketball shoots. They do swim-a-thons. All of them are doing stuff and they're raising, with all the team and everything, they did over \$100,000 every year for ... six years now, more than that.... The Moose gives a lot, the Elks give a lot ... all the different organizations in town and out of town too.

We are building a new church, and we just took an offering for that a couple of weeks ago and it was \$18,000 from a little church with 50 people in it.... That's in excess [of regular donations] and that was October. It was at the end of [the fishing season]. They knew what they had [to do].... And it's just there.... We had a fundraiser for a lady in town who ... has cancer. They did a fundraiser for her because she is back and forth between here and Anchorage all the time, and they had just a phenomenal amount of money raised just from silent auction items and then a dinner.... Stuff was donated; food was donated. [It was]... \$25.00 a family or \$8.00 an adult, but they do that all the time. The whole town, [the] community comes to the aid of people who are in need, whether it be the house burned or whatever.... Dinner[s] for cancer fundraising, for their airline tickets, or whatever they need.... It happens all the time.

#### 4.6.4 Social Cohesion in Cordova

As discussed in Chapter II (Table 2.1) one of the primary outcomes of social capital is social cohesion. During the first interviews I conducted, a number of individuals indicated Cordova is like a family.

It is kind of like that bad family member, you know? It is okay for you as the sister or brother to talk bad about them, but God forbid anybody from outside the family or the blood to say something bad about them. That is kind of the way I became with Cordova. When I would see an article in *The Anchorage Daily* ... that was kind of slanted against Cordova and sort of slamming them ... I was quick to respond to that.

Personal experience during my first weeks of formal interviewing reinforced this notion, as I wrote in my journal after attending the Fish Prom on September 7, 2002:

*Attended the CDFU<sup>12</sup> 'Fish Prom' this evening.... I really went 'out on a limb' in going – made the conscious decision to branch out into what [some of my Cordova contacts] refer to as the God-damned yuppies. It was a different group of people from that which I've been exposed to so far here in Cordova. Met lots of great new contacts and even scheduled an interview for tomorrow.*

*This was a very interesting set of people – primarily commercial fishermen or those closely associated with them.... [I spoke with one individual about my research and he indicated] that some people were just looking for something to be mad at. But, he was also really careful to not minimize what others had experienced. It, as he put it, 'set him on his heels' when he thought I might in any way be headed in that direction with my [study]. I assured him that I intended only to obtain a representative sample – which he seemed to appreciate. I'll likely interview him this trip.... [He later commented], 'It's important for people (outsiders, I suppose) to realize that they're not all still depressed and down, that 'life goes on.'<sup>13</sup>*

This experience brought home the fact that Cordovans would not tolerate the proverbial notion of me “picking on their little brother.” I asked subsequent interviewees about the analogy of Cordova being like a family and virtually everyone concurred. A relative newcomer to the community commented, without prompting from me:

*It is almost like a family system. It is a very ... healthy community in a lot of ways.... [People are] very supportive of each other. It's small enough that people in need, other people know about it and they help. They help with some assistance. Any way that they can help ... they are a really caring community.*

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<sup>12</sup> CDFU is Cordova District Fishermen United, “a nonprofit organization of Cordova area fishermen who have banded together ‘to preserve and protect Area E fisheries, and promote safety at sea’” (see <http://www.crsalmon.org/>).

<sup>13</sup> I interviewed this individual on a subsequent trip.

Other long-time residents provided these perspectives:

You may really hate a guy's guts here in town and fight and argue all the time but out there [on the water] if one of yours is in trouble you come to their aid because it could be you. You never know. Then they'll stick with you. Sometimes I'm here in town [and] I hear some guy running another guy, downing him, and then next time they're pals.... It's like ... family. That's how it is in a family.

Even though [people] may leave here they may come back, especially the younger ones that can still fish. We have got people that are in their 80s that have come back here to our senior home because they want to spend their last years here. There will be people to leave, and a lot of those people will be back the next summer. It may be cheaper to buy a home in Oregon, or Washington, or southern California and retire and be able to live fairly comfortable, but you see those folks every summer. They come back from wherever they have moved to come back to the community. It is like family. No matter how angry you get with the rest of the family and leave you are going to be there for Christmas or New Year's or for summer in Cordova (*laughing*).

Cordova's sense of community is still very much intact.... We don't take much from anybody, which is why we are not real popular down in Juneau. We can be divisive amongst ourselves, but we allow ourselves to do that. We don't even agree to disagree. We sit there and argue vehemently, but it doesn't mean we don't care about each other.... Let somebody else [try to] come in and it's, 'Excuse me. Who are you? Do I know you?' In the same sense, I guess that leads on to a different topic, which is the fact that this town is incredibly giving in cases of emergencies and in the same as the oil spill when anything occurs, divisiveness is gone. Divisiveness I think is a better word.... Be it trauma, a fire, somebody loses somebody, any kind of number of things.... [Then], divisiveness is gone.

You would think in most normal circumstances that most of us [in my social circle] wouldn't be able to get along with each other at all. But again, we are best friends. We admire each other's differences. We celebrate their differences. We don't always agree but we know we need each other. We need each other's intellect and support to have our extended family.

I stayed probably because of my core group. As I said before, a lot of us came in our early 20s in a time when we were wanting to do something, an alternative lifestyle to the city. I probably stayed because of that core group. I have never found a group of women [like this group here].

The impression of the community [when I first got here] was tolerance. That's the main thing I remember.... People could get away with whatever behavior and because it was 'Joe.'<sup>14</sup> We know what he does. He's very predictable, and therefore he doesn't bother anybody. In a big city somebody does something out of the norm and everybody's really cautious, and here ... people's behavior could get much more outrageous, but because everybody knew him [it was okay].... Because that was 'just Joe,' and that's what 'Joe' does. It was tolerated. Tolerance ... was the biggest difference I saw here as opposed to a larger community. It was familiarity that I think allows the tolerance.

As documented in my journal another commercial fisherman mentioned this aspect of life in Cordova during breakfast: "*Cordova's got its share of crazies, but we know who they are*" (November 5, 2002). The tolerance described here, bred through familiarity, is one important aspect of social capital. Regular interaction with others helps people understand different perspectives and has the potential to create trust in a community.

Several quotes qualify descriptions of family-like cohesion in Cordova by noting arenas in which residents often disagree – particularly on the issue of extending the Copper River Highway from town into Chitina along the old railroad route.<sup>15</sup>

Yes. I agree with that whole-heartedly, [that we are like a family]. Basically [we] like to fight and squabble amongst ourselves, but when it comes down to someone being in trouble, someone having like a cancer in the family or something like that, everybody gets behind you. It is a cohesive group if you want to speak in them terms. In a lot of other issues the town will split right down the middle. One side is going to fight for this, and the other is going to fight for that. Like our road for instance.... We have been talking of a Copper River Highway for years and years, ever since I can remember. It has always been 50/50 right down the line.

This town is 100 percent.... You can have somebody that has probably argued together for years about 'Do you want the road or not the road,' but should ... harm befall the person, the person that was their adversary will be right there with the first plate of food to say, 'Can I help you?' [I know

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<sup>14</sup> The name "Joe" does not refer to a real person.

<sup>15</sup> For a discussion of this refer to Lethcoe and Lethcoe (2001:159, 177, 246-47). This issue is also addressed later in this chapter.

this from recent personal experience.] It was very obvious that they cared so much.... Cordova admires people that survive and they will always stick together for anybody that is one of their own. We all go to the same weddings. We dance. We sing, and we will still turn around and argue with people about this damned road.

The extent of social cohesion and sense of community can make it difficult for some individuals to transition to the outside, particularly young people who were born and raised in Cordova as the following example indicates:

I know that a lot of people move outside thinking that it is going to be better for them someplace else, and they have such a hard time. Often they come back because outside it is hard to make friends these days. It's not an easy thing to do. Finding your sense of community in the Lower 48 is much more difficult than [it is here]. My daughter is a prime example. She went to [university] and she did so poorly.... That's when I asked her. I said, 'What's wrong?' She said, 'Mom I have no sense of community here....' She was so used to be able to walk down the street and have ... people wave at her and ask her how she was doing and know that no matter what happened that these people all cared so much for her and what she felt and what she did. She didn't realize how much she would miss that when she had gone to school. A lot of people that leave Cordova thinking that they are going to find the promised land outside economically ... they find themselves very, very lonely because in that respect Cordova is so tight knit.

The previous comments suggest considerable social cohesion among Cordovans with respect to some issues; however, as discussed in subsequent chapters, the subject of the EVOS is not necessarily one of those issues. As reported in numerous interviews, a variety of community and family events foster social cohesion by bringing people together. One fisherman in his mid-40s recalled his childhood in Cordova:

It was so laid back. It was a special way of life.... They'd throw big parties – Fourth of July parties, Iceworm parties in the winter... They had Mardi Gras nights and ... it was just really neat.... The type of community that we had was ... [my parents] would invite ... maybe 15 couples over and ... everybody would bring something.... Everybody would bring pillows and they'd lay around the fireplace and they would take canned potatoes, moose meat, marinated moose round steak, and green peppers

and make shish kabobs. They'd all cook their meat and they'd go home ... by 5:00 or 6:00 [in the morning].... That's the way it was. In the wintertime ... in the early '70s and late '60s we'd go to families' houses and they'd play cards all the time. This might happen three, four times a week.... They were always talking, communicating.... It wasn't just sitting behind a TV for entertainment. It would be talking, playing pinochle.... Everybody got together 'cause there wasn't TV and TV wasn't a big thing then. They'd rather communicate with other people and associate [and] visit .... That's how life was when I was little. It was fun. [We had] ... a real sense of true community. Everybody knew everything going on in town. You couldn't get away with nothing.

As expected, present day accounts of community events slightly differed:

There are always different community events that bring the town together, like Iceworm and ... Christmas, because we have different things going on ... bazaars and stuff at the high school for the kids. [At] Christmas you see the community come out and that's when you can really tell how many people are in town or not (*laughing*).... That's nice, mostly in the wintertime. In the summertime everybody is so busy that there really isn't anything going on in the town other than the community picnics and appreciation banquets from [the] Coast Guard and things like that.

When I inquired whether there had been any particular events that have brought the community together since the EVOS, one community leader replied:

There have been some wonderful weddings, and those bring people together. The emergence of the Native Village of Eyak as a cultural center has had some soothing effect. It has brought people together. We have our own Alaskan Native Dance Group in Cordova. It is a charming part of our town. I think that all of those events have forged us together.

Others cited different holidays or social events contributing to community interaction.<sup>16</sup>

Holidays, specifically Christmas. It always does. There are a lot of fairs and kid activities. There are always kids' plays and music programs.... We probably forget about [our problems] then, when the holidays are pending. Cordova is good about rallying for social events. Anytime we do the Fourth of July celebrations and community picnics and stuff like that,

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<sup>16</sup> From my work with Gill and Picou, I had heard accounts of a visit by a contingent of Russians in 1991 that seemed to provide a great boost to the community. Very few of my interviewees recalled that event as something that brought the town together, though almost a decade had passed by the time of my interviews. Those I prompted on the subject said relatively little about it.

you pretty much put your fishing woes and other woes behind you and have a good time.

The Sobriety Celebration. It started off kind of small. Now it's ... a bigger deal and more and more people are going to it. It's there to help, I guess, make people sober or whatever, but it's a nice community event where people can go and see each other and talk to each other, on [more] than just a daily basis, more social activity where parts of the community that don't talk to the other parts, or they do, but not on a personal basis, can see each other there.... I don't know how to explain it, but you get little cliques of people, they know each other and stuff, but they don't really communicate on a daily basis. Whereas, there they can pull together and talk [at the Sobriety Celebration]. [That's] probably the only thing, the last couple of years, especially this last year.

We've had several town meetings where the community's come together and [our] mayor, [has] brought the people together.

When I asked a lifetime Cordova resident about my personal observation that people in Cordova tend to create their own fun, she agreed:

Yeah, they do. You have to be that kind of person to live here. Lots of dinner parties.... People get together to eat, and so there are a lot of events to get you over the hump, like Iceworm gets you over ... this weather (*laughing*). Going into springtime is really exciting here.... I hope that you can come when the gill-netters are coming in. It's so fun on that first opener. The excitement, the taste of fish is pretty neat (*laughing*).

I think [my friends and I] are all kind of drawn together because we all have a great sense of the absurd, and we also have a great love of life. There is this planet; it should be enjoyed. Some are more artistic than others and it's real interesting because we all have different talents.

People talk about being bored here. I go, 'Are you brain dead?' It's all I can do to avoid being out doing something.

The annual Dress to Kill party for Cordova women is further evidence of a tendency among Cordovans to generate their own entertainment. Typically held in March,

Dress to Kill was originally started as a bachelorette party for [our girlfriend] when she got married. It was originally just 30 of us. It was a

very small group of friends. The core group did decide to throw a party and we have clothes that we never got to wear and so we decided to get dressed up. We found five guys that wanted to serve us champagne in tuxedos, and it's not our fault that they turned their bottoms into spandex. We had nothing to do with that.

Finally, a discussion of "events" that generate social cohesion would be incomplete without at least briefly touching on the subject of commercial fishing. Because the occupation is so dangerous – at least one fisherman a year is lost to the sea – people are very aware of the importance of ties to others in the fleet. As one young woman, the wife of a commercial fisherman and lifetime resident of Cordova stated:

It's really neat to see what bonds they make out here, as there's nowhere else in the world like it. Because they are depending their life on each other. If they have a problem with their boat and their life's in danger, the people go and help them without thinking twice about, 'How much money am I losing here to go help that person?' [That's] not even an option, it's just ... you do it. They do have a great friendship between people. They're out there by themselves on the boat, so the communication between other boats is wonderful and usually they have a group of radio partners, they call it, and they talk to those guys constantly. Somebody always knows what they're doing and where they are. It's a dangerous industry out there so if you do get in trouble you know where your person is or where they're supposed to be.

Narratives of tragedies and other unpleasant events reveal the strength of Cordova's community bonds and social capital under difficult circumstances.

Cordova is ... really positive.... They come together through any kind of crisis. It's amazing. If somebody passes away ... even if you don't really know the person, they just jump in and do everything for them. If somebody's having a medical crisis [it's the same].... I think there's just lots of little things that people do. It hasn't been like, one event, that brought everybody together and changed.

Death is a great equalizer. We have been through more than our share of deaths. That brings us together. Disasters bring us together, but also community events.



I inquired about the avalanche of 2000, asking how the community responded to that natural disaster.

That was probably a good idea of where community did come together and it was really a heartache, especially we were [really close to] ... it. It was hard, 'cause you lose your neighbors; you lose your friends, people that you know. You're losing everything. People lost ... lots of stuff. It was a heartache to see, and then also Cordova just came together and just said ... 'What can we do and how can we help?' And so that was real positive, but then you also have a low of, "Oh man, you just lost, you lost a lady."

[After the avalanche] I stayed here at the facility in case they needed people here.... Basically the whole community just volunteered. It was very well arranged. People went out [and asked] ... 'What can I do?' but they didn't get in the way. Ones [who] ... weren't needed just came on back to town and prepared other things to help assist with other duties.... [It was a] community effort.... Everybody pitched in.

[The avalanche] did bring Cordovans together a lot. Another one, there was an avalanche at Whiteshed and ... a snowmachiner died last winter. That brought a lot of people together, too.... These guys went up to check on him and they got caught in the avalanche that he triggered. They got word down here that there was an avalanche and the rider was still missing. So the whole town, it was probably 10:00 at night by the time they got word back to town and the whole town basically went up there and until they found the body. So, just little incidences or crises that happen in Cordova that the whole community – they don't ask, who, when, where – they just go there and show up and say, 'What can we do? In that way, it's been a good positive place still that people do come together whether it's good things or bad to help.

I think in all tragedies, quite frankly, it's the women who come forth with the cookies; it's the women who come forward with the hugs.... You know my mother has always said, 'Chop wood carry water,' and it wasn't until much later that I realized that it is a Buddhist philosophy. We grew up chopping wood and carrying water.... I just have been involved in another helping thing. I thought, 'Now where did I learn this helping?' It was from my mother saying, 'You don't offer to help and you don't sign your name to help. You simply do.' You chop wood for the neighbor, you carry water, and that is what we are still doing here.... Chop wood, carry water. Do something for people, and it doesn't count if you have to attach your name to it. It doesn't count if you need to ask people, 'Call me,' or 'What needs to be done? I'll help you.' Just jump in there and do it. It's

what we do in a small town. It's what humanity does for one another. If the world's going to change and be a better place, it starts with the individual. We are just very lucky to be able to help one another in our community as much as we are. In a bigger environment, they commission studies on tolerance.... We just don't talk the talk like that in Cordova; we just walk the walk. We are a very caring and nurturing community.

While sitting in the bar at The Reluctant Fisherman one late afternoon during my May 2001 trip to Cordova, I observed what appeared to be an informal memorial service for a fisherman who had drowned. It was brief, yet touching; several women – one of whom I assumed was the man's wife or girlfriend – toasted his memory and reminisced. It was one of many sentimental moments I witnessed in Cordova that will remain with me forever, as evidence of the closeness of those left behind, their determination to go on, and the dangers inherent in a life of commercial fishing.

Notably, most of the aforementioned crisis situations in Cordova require time-limited “coming together” or support for a particular cause. In other words, citizens pull together for brief periods to “get the job done” or assist someone in need. However, this capacity does not extend (nor does it need to) beyond a finite time frame. These observations support research on community response to natural disasters versus technological disasters discussed in Chapter II of this dissertation. With the exception of one individual, no one I spoke with referred to the EVOS as an event or situation that “brought the community together,” and he did so in limited fashion:

Initially it was, in a weird way, kind of a beautiful thing to behold, because people who are more familiar with competition ... all of a sudden saw a common threat. Whatever other problems they might have had suddenly became extremely petty and just out the window. The whole town just kind of came together. It was really cool to see; that didn't last, however. As some people got big money for working on the spill, other people didn't and some people kind of sold out. All of the sudden it became kind of a nicky, tear-apart, divide and conquer rather than unite

and survive sort of thing.... [I worked on wildlife rescue.] You made a lot of quick friends in situations like that. Where it might have taken a long time to meet people and get to know them; there's not enough time for that kind of stuff, introductions. You know, 'We've got a job to do.' It became more [like] ... bonding.

#### 4.7 “Cordova’s Like Any Other Small Town, Only More Intensely So:”

##### **Drawbacks of Living in Cordova**

Despite the peacefulness of small-town living in Cordova, people discussed drawbacks to living in the community. Among general themes were children (and in some cases, adults) not having enough to do, lack of anonymity, small town gossip, and the high cost of living in Cordova.

[On the other hand] there isn't enough things for the kids to do to keep busy.... When I was growing up for example I always went to the movies with a friend and they don't have that here. They have the gym and unless you are church oriented that is about it, the library.... I don't like it for [my husband] in the winter. I can stay home and not do anything and be fine but I have to worry about [him].

The only [bad] thing is ... [our kids are] so insulated and isolated here. The world sort of comes here but they don't get out into the world much and so they have a skewed [view of the world]. They are used to seeing people they know actually on national T.V. It's weird. We have gotten ... all this attention during the spill [and] you could recognize ... [local] people on TV being interviewed as experts. [On] the 10<sup>th</sup> Anniversary [of the EVOS] our kids really saw that. The kids kind of have this funny little thing that Cordova is kind of the center of the universe in some respects. Then even when we go somewhere for a vacation ... [it's to see family or go to a resort].... I can see where they have a real skewed view of the world so I want to do something about that.... It's so weird because so many weird kinds of things happened in Cordova that I guess they thought that was normal to have all this attention you know? But it's kind of funny in that aspect .... I know I didn't know that I was raised in a real special place until I had left here when I was an adult. When you are a kid you know just life, you know?

Quantitative data collected in 1991 suggest a general attitude among Cordovans that opportunities for young people there are “poor” or “very poor” (43.4 percent) (Picou and Gill 1995b). Slightly more than one-third (35.1 percent) of Cordovans reported that opportunities for young were “fair;” a total of 20.6 percent responded “very good” or “good.” For most, it seems negative aspects of a quiet and somewhat isolated life are offset by other experiences, mentioned in previous sections, as well as below.

I like the lifestyle of raising kids here. I think that kids and adults both miss out on a lot by living in a small community but I also think they gain a lot by living in a small community.

The following quote addresses issues of gossip and rumor in Cordova:

We used to have this saying ... particularly in the spring when you are trying to develop a fish price for your product before the season starts, that if you [started] some kind of rumor at one end of the town and then ran like hell to the other end of town, the rumor would already be there before you could get there. That is the way small towns are, I think. They have these rumor factories and of course they get embellished as they move down the line until finally they are at the end and you don't recognize them. I think that is a fairly accepted ... phenomenon.

When I asked about this during subsequent interviews, fishermen I spoke with confirmed this notion.

Exactly. That is how this town is. That part of it I don't like. I think that it has gotten worse because people are frustrated. They like to talk a lot more when they are [down]. I really believe that there is more bullshit because of peoples' financial situation, depression. They like to forget about what is going on with themselves and talk about somebody else. I don't go for that. I don't like that. I never have.

Cordova's like any other small town, only more intensely [so].... It made Peyton Place look like a walk in the park (*laughing*). You wouldn't believe some of the stuff that went on. It's typical of a small town only more in this environment because we are isolated. We are on an island, surrounded on all four sides by water. We don't get out much in the wintertime. [Back] then it was physically hard [transportation-wise]; now it's too expensive.

Others cited the following as reasons it can be difficult living in Cordova:

I sometimes see people being hard on each other, being disrespectful or something.... And I kind of do a retreat thing and that's where my faith comes in, and I basically take it to the Lord in prayer. Things can only be changed by prayer.

The perspectives of other interviewees seemed to contradict ideas of disrespect, intolerance, or lack of privacy in the community:

[The town] is like a big family.... You get to know everybody, but you don't have to be out in the limelight if you don't want to. It is a small town, but sometimes there is people that I don't see for months. You run into them in the grocery store ... 'Hey where have you been?' 'Oh, I have been here.' And as far as the fighting part, yeah there is especially certain times of the year, cabin fever time and spring fever ... fishing fever time when the guys are getting ready to go fishing.

[The best thing about living here is that] I can be reclusive. I can go and hide and not be around anybody or I can go up town and around people. I can choose to do that. I'm not forced.

Small towns have their negative sides for some people, but I don't mind not having any anonymity I guess.

Additional challenges of living in Cordova emerged across interviews. Issues generally associated with change in the community's composition (for a variety of reasons) were cited. Three long-time residents of Cordova reported:

There's been a transition ... the Philippine community used to be the main workers in the processing areas and they still are because they have such seniority. [We have] a very large Philippine community in this town. So, slowly it has transitioned to Mexican and Columbian workers that have been coming into town. [Now we have a bigger] language barrier.

While I was growing up, Cordova was a united community in that there were no transients. You had some construction, and there were a few people that would come and visit, but the fishing community itself was relatively stable. People would get killed or die or something would happen and they would leave, but the 2,500 or so people that lived here were all fishermen, and they held dual [permits].... They gillnetted and they seined. It wasn't two different units, which is what it is today. It was all one group.

We've caught up with everywhere else in the world. We have paved streets. The federal government is here now. They were in the '70s too, but now they are here with the big Forest Service, a lot of Forest Service families, Coast Guard families. They have taken up a lot more of the community than they used to.... City hall in the '70s consisted of ... the clerk; one, possibly two, police officers, and they had secretaries. That was all at City Hall. Now there is probably 30 or 40 people that work down there. So it's ... big. You know the community I wouldn't say has grown that much more either.... I guess that's how things move along. There is a lot more state workers. I would say for the majority of the community, the state, the city, and the federal, I believe, there is a lot of jobs in that bunch of people. Where it used to be the majority of the people in the town were fishermen, and it's not anymore.

Other narratives spoke to this issue, as well, particularly in post-EVOS Cordova:

The Forest Service, prior to the spill, their annual, local budget was about \$200,000. It is easily \$3 million now. Two years back it was \$2 million.... I'm guessing it's more now. They spent at least a million on that building just in that last year, so that's changing the economy. They are also supporting ... a lot of families.... We have now a larger contingency that is basically federally funded jobs and a lot more Forest Service here.... I don't know about FHA [Federal Housing Authority].... At one point they bought a whole bunch of houses in town [and] ... that was a big impact there for a while.... We have had more state jobs, more federal jobs, even more city jobs because ... like all around the country there is just more paperwork involved in being a government. I think the economy has really shifted in Cordova to something a little more stable, but I don't know what is stable anymore.

A middle aged commercial fisherman who was born and raised in Cordova made the following comment:

I could walk down to the high school 20 years ago [and] I knew everybody in the school. I go down to the school today, I know a third of the kids. I

don't know all the kids just because there's a lot of government workers here in town now and Coast Guard families that I'm not real familiar with, and Forest Service, FAA, Science Center so that aspect of Cordova has changed.

An elderly Native woman commented:

The only thing about Cordova now [is that] it is so different. A different type of people live here now. All the people that we know ... that [my husband] went to school with, he hasn't got one of those living anymore. He has no family living anymore except for ... [my son] and me.... I don't have any friends anymore here. They are all dead or have moved away in nursing homes and stuff like that. They are a different type of people all together.

When asked what she meant by "a different type of people," she said, "Well it is hard to explain unless you have lived here and know the change in the population."

A younger commercial fisherman perceived and acknowledged a change, as well:

[The community was] pretty close knit. Everybody knew each other and would help each other a lot. You still see that today, but there's a lot more influx from people that don't live here, that come here that ... bring their attitudes with them, so to speak.... You just knew everybody. You [would] go down the dock; you knew everybody and [would] help each other and it's a real good place to grow up.

Certainly, a number of changes taking place in Cordova parallel those occurring in the Lower 48, as well. An elderly couple I interviewed had this exchange<sup>17</sup>:

R1: When I was a kid I used to sell papers here. There used to be a lot of Norwegians lived over in the ballpark. A lot of Fins lived over in this side of the slough. Greeks lived over here. All the people that worked on the railroad, they stayed here. People over the slough, the Norwegians, they wouldn't go uptown unless they had a suit on. They would have a suit and a tie on just to go up town. Had you seen them after fishing season they were always dressed up real nice. You don't see that anymore.... There will be people sitting there with their hats turned on backwards.

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<sup>17</sup> R1 and R2 refer to two different individuals.

R2: That is the whole thing now days. They don't care how they look. I don't care who it is.... Well, some dress with more expensive clothes, but still they don't dress like they used to.

R1: The Fourth of July they always had the big parade and they took big pride in their town, but now they don't seem to.... They do some with Iceworm.

A young woman complained during her interview:

[Kids] don't got to do as much. When I was young we packed wood ... We did more things. Our parents made us have more chores. Now, it seems like a lot of kids, their parents can't control them because they can't scold your kids. Then kids go to someone and say, 'Hey they're beating us' or something. We used to get spanked if we got out of line. Nowadays you can't do that to kids. I think ... it's changing because 50 years ago you did a lot more for your parents and you didn't get paid for it. You didn't take advantage of that. You did stuff. You went out and got wood; you chopped wood; you did dishes; you did stuff. Now, the kids aren't really doing anything. They expect things for free, and they don't work for it. Our kids are kind of trained hoodlums because of that. They don't have respect.

Some specific drawbacks associated with living in Cordova are related to the economy there, as the following comment by a former commercial fisherman and Alaska Native suggests:

[It's getting harder to live here] because the [fish] prices are going down, but the cost of living is going up. Everything is going up except for the prices [of fish] and that means the more you got to catch. You've got to double what we used to catch in the 70s; you got to catch double that to make ends meet. It's a lot of stress, a lot wear and tear on the crew and the boat because you got to be out there that much longer to make it.

Another Alaska Native stated, "Our environment is in turmoil. Our environment is in the sense that ... I can't do things at home because I don't have the money to do it you know all the repairs that need to be done."



Some additional financial tensions stem from taxation issues, which tend to highlight distinctions between government (municipal, state, and federal) and non-government employees as in the following comments:

The town itself pretty much holds ... well, tries to hold together. [There is] a lot of conflict between the City of Cordova and the citizens. How many city employees we've got in such a small town. How many ... it's getting to the point... well, like property tax, for Pete's sake, I pay a couple thousand bucks a year. I only make so much a year; it's ridiculous... Unless you are a city employee you can't afford the rates (*laughing*). There is no saving money in this town; it's just making enough to survive. Saving money in this town is getting to be an obsolete word... There's so many less people here now that there is not enough, I guess, to stay in the city. Then between the city and the Forest Service and the Coast Guard, there is a lot [of money] that doesn't come back into the city because ... they don't pay property tax and they don't ... [bring] money into Cordova itself, no. Unless you are a city or state employee or you have a really good job, it's hard to make it in this town on wages.

I couldn't believe when I heard city council the other night. I thought, 'My goodness did somebody die here or what?' It was one of the most depressing meetings I have ever heard. It hasn't gotten that much better. I didn't realize that the economy was to that extent. I knew it was bad, but with the city... I felt that ... things were bad, but we will work through it. We can't get paralyzed by fear. If not we will really lose.

And what's happening is the town is driving everybody out of here. Not only are the low fish prices, every time I turn around the city is wanting to tax you for this, or do that and it's just making it harder and harder to live here.

To summarize, most individuals I interviewed felt positive about living in Cordova, expressing they lived there because they wanted to live there. All but 4 of my 42 interviewees currently living year-round in Cordova indicated they would not move outside, even if they received some sort of payment from Exxon. Two of the four who wanted to leave cited financial reasons, but could not afford to move outside. One expressed it as, "I can't afford to leave and I can't afford to stay." The other two were

considering leaving so their children could have access to more school related athletic activities, specifically football, though I did not sense that a move was imminent for them.

#### **4.8 Community Division and Bonding Social Capital in Cordova**

Personal observations, as well as formal and informal discussions with Cordova residents, reveal several issues tending to cause tension if not outright division in the community. Among the most evident is whether or not there should be a road built into Cordova along the old railway route to Chitina and the subject of seasonal or part-time residents – an issue of “bonding” social capital.

##### 4.8.1 “I’d Be In Favor of a One-Lane Road Out Of Cordova:” The Road from Cordova to Chitina

To reiterate the comment of a lifetime Cordova resident regarding the road:

We have been talking of a Copper River Highway for years and years, ever since I can remember. It has always been 50/50 right down the line.

According to Lethcoe and Lethcoe (2001) who cite a 1993 study of potential social and economic impacts of a road, Cordova residents were almost evenly split on the issue (43 percent in favor and 42 percent opposed). The study indicated a road would increase summer tourism, including the number of hunters and sports fishermen. Quantitative data collected in 1992 provide similar information, with 40.8 percent agreeing that Cordova would benefit from a highway, 17.8 percent neutral, and 41.4 percent disagreeing (Picou

and Gill 1995b).<sup>18</sup> Comments by several individuals reveal potential social and economic aspects of having a road into Cordova:

I'd be in favor of a one-lane road out of Cordova for anyone who wants to leave, as long as we don't have a road into Cordova – like a check valve. It only goes one way (*laughing*). We can drive out and we have this most incredible piece of real estate that's almost our own private little park out here. We drive up the highway. Labor Day here or something there'd be 400 or 500 motor homes all over the goddamned place and there'd be people down here – all our favorite little [spots] ... that are so nice now that you've kind of got to yourself. You'd just be inundated with people.... Folks talk about the road. Sometimes I think, how would you really like it if you're down at the Alaskan Bar kind of being yourself and it's half full of tourists from Anchorage and all just standing there watching you? You'd feel that you can't be, maybe the asshole or whatever, you can't quite be you as much then.

I know access is a problem and infrastructure is a problem just for commerce but I think building a road would sort of be throwing the baby out with the bathwater.... It would ruin why we want to live here.... I think a train would be fabulous but it would cost too much, but the reason I like the idea of a train is because you access the freight hauling [but it] doesn't give you automobiles or gives you very few and it gets them from point A to point B without access in between. The number one reason I dislike the idea of a road is ... it gives everyone access from all the way along the Copper River and that sort of access would be terrible for Cordova because they are so dependent on the Copper River resource.

I kind of like Cordova the way it is.... We don't have to share it with anybody. It is part of the world we don't have to share. There is just a lot of pulling going on back and forth inside of a lot of people. I feel the same way. I want the road to go through, but I don't want the road to go through, you know? Most fishermen don't want the road to go through up at the Copper [River] because they know that is going to put more fishing pressure on the upper Copper River, and that in turn puts more pressure on the fishermen down here on this end of the Copper [River]. They don't want to see the road go through. They do have a point. Things are going to change whether we like it or not, but a lot of people feel like change is occurring too quickly. People don't like to change. None of us like to change.... It is really hard to do sometimes.

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<sup>18</sup> For additional information regarding economic effects of a highway to Cordova, see Fried and Windisch-Cole (1999).

These comments suggest a certain amount of bonding social capital, a form of social capital that is inward looking, fostering exclusive identities. Again, it is that to which Putnam (2000) refers as “sociological superglue” (p. 23). Bonding social capital creates strong in-group loyalty but may generate antagonism with external groups. Furthermore, liking Cordova “the way it is” reflects resistance against what is likely inevitable change.

The following narrative highlights certain impracticalities associated with opening a road into Cordova:

I think [the road] would be a total waste of money. It would only be open three months of the year because right now there's so many snow storms out there they'd lock it October 30<sup>th</sup> and you don't get in there until May 1<sup>st</sup>.... It would be a total waste of money for nine months of the year. Why don't they take ... [the] millions of dollars and put in the marine highway system? We have that everyday going that way and making it cheap enough that people can drive in and bring their campers and still go out there ... go that way. What if you could put something into use 12 months of the year versus 3 months of the year, what would you do? Which would benefit everybody or which would benefit the tourists because the other three months everyone else is working their tail off. They won't be able to use it. Just what would you do? I would tend to go with something on this end because it just seems logical.... They were all going to do bridge work ... we had people in here in March coming ... [who] couldn't get past 27 Mile because it was blowing so bad and they spent three weeks here sitting on their duffs not doing anything because of the weather out there. Now, they if they can't go out there to work or even drive because of the snow drift why, would we have the road? ... The people who are for it haven't really realized all the financial impacts.... It opens up June 1<sup>st</sup> in front of that bridge. It's a 25 to 30 foot drift and they have to plow it out to even get out there, June 1<sup>st</sup>!

Despite the 50/50 split in quantitative data sources, none of my interviewees seemed to be whole heartedly in support of building the road, although one Alaska Native community leader pointed out with respect to tourism issues and fostering that industry:

We are pretty damned isolated here, and we have an isolated mentality on a lot of things. It is harming us. It should balance somewhere. We want to protect [our natural resources]. The community in general ... we are up at arms [over that]... Heaven forbid would we allow tourists to come to Cordova (*sarcastically*). My God ... I am a tourist every time I leave the city limits. We don't understand what a tourist is. Tourist is my brother-in-law coming to visit me. Everyone wants their brother-in-law to come visit them, but they don't understand when you bring a boatload of tourists in, whatever number 50 or 500. What do you want?... We don't have an understanding of what [we need to do].

Apparently, the road is not the only issue on which Cordovans have been divided over the years, as these comments suggest:

Looking at the 23 plus years that I have been here ... we are a town divided almost right down the middle, as far as whether we should be progressive in looking toward seeing some of the resources – opening up road – and that kind of thing, as opposed to the preservationists that want to shut everything down and throw away the key. We are a town divided right down the middle.

50 percent of the people would [be] ... Democrat and 50 percent Republican.... 50 percent want a road; 50 percent don't want a road.

#### 4.8.2 Seasonal “Versus” Year-Round Cordova Residents

There are approximately 2,500 year-round Cordova residents (i.e., those who remain in the community through the winter months as well as during fishing season). This subject of part-time or seasonal versus full-time residents represented one of the more “controversial” topics during my interviews and was also apparent from personal observations. Much of the controversy had to do with financial aspects of year-round versus seasonal residency in the community and whether the seasonal residents contribute to the community's overall well being. The following comments suggest this distinction represents another form of bonding social capital in Cordova:

Okay, how do I say this properly? There are people that don't live here year round that are year-round Cordovans. Okay? There are people that live here year-round that are of course ... year-round Cordovans. There are people that come up here in the summer that are not year-round Cordovans. They are just people that come up here in the summer to make money, and they will never be a year-round Cordovan. They are just 'Joe Schmoe' from Oregon, Idaho, Washington, Homer, Anchorage, or wherever. They just come here to make their living. They live on their boat or they live in a little room down at fisherman's camp, and then they leave. They spend very little money here. Quite frankly for the most part they don't give a shit about anybody here. They are not going to drop any money here. That's their prerogative. Do you understand what I am saying by there is people that don't live here in the winter now that are still Cordovans? Those are the people that grew up here and spent 35 years here or 25 years here. They decided, 'I've got along long enough in my life. Now I am going to go live somewhere warm for the next four months or the next six months or whatever. Then I am going to come back.' They still come back here. They spend money here, they have houses here, they have vehicles here, and their boats are here. They live here. This is still their home. They go somewhere else to spend six months, four months, whatever it is. Those other people, they don't live here. The only thing they do is come up here and make money, and then they leave.

There are a lot of fishermen that come up and fish in the summer time then they leave. They take their money and leave. Some of them don't really help out the community. I think they should have to. I think they should have to give something to the community. They are just taking their money and leaving and the rest of us that live here ... we support our town. They don't support it. They just come in for the summer and leave.... If you work here, then live in Alaska at least. But when you go into the Lower 48 that's kind of bad.... It is almost like they are using the industry. More like they are using the town.

I don't have any problem with that [people who live part-time in the community]. No, I don't have a problem with that. I do have a problem with [the guys from Washington and Oregon here for the] ... Board of Fish [meetings].... Here everybody's livelihood is on the line but yet you got the local people fighting for it.... And when I'm saying local, I'm still talking about the guys in Anchorage and Palmer that came down here for the meeting. They're still locals, but [not] the guys from Washington and Oregon. Most of them ... they're not here and they never have been here and they never will be here. When they come here they make their money and they don't leave it in the community at all. They're not here to donate to the Girl Scouts or to the Boy Scouts or to the this or that.... [Not] in the wintertime or even in the summertime. They're here to make some money

and leave; that's what they do. They get by up here as cheap as they can.... Who knows the situation in their lives either, but it makes it hard.... Anybody who stays here 12 months a year knows how much it costs to live in this town. It costs a lot of money.

The non-residents, they come in here and make the money and don't spend much money doing it and then they turn around and take their money and leave. The people that are left here year-round are left with the taxes and the high prices and basically keep this town up and running until they come back again. I wish there was a way to make it a two-level system where you could tax them too, to help support the town that we have to live in [during the] wintertime.

I think that probably the reason there is some division is ... in '89 several of the people ended up moving and either moved down below or down in the Wasilla/Palmer area [outside of Anchorage]. I think that probably part of that is coming back up again.... Before the spill there was this dissention, and then it calmed down before the spill, and then after [again it came back]. It kind of comes and goes. I think the reason is because of the economy, partly. The cost of living in some ways has gotten more expensive.... There was a thing that came out a few years ago when property tax came up. There was this rift and it wasn't just among the commercial fishermen. The community felt that, 'These darned commercial fishermen ... none of them have property here. None of them pay property tax.' In fact there are many that do, that ... have homes here or trailers, and they do pay property taxes, more than [people] think. [That dissention] ... is being caused ... because of the cost of living and things going up.

This final narrative represents the only comment I heard suggesting seasonal residents were less affected by the EVOS than year-round Cordovans:

I think a lot of it has to do with your geographic relationship to the disaster. If you live right there where it happens and you're in the resource based, hunter/gatherer, sort of what fishermen are, you can't help but be affected ... as opposed to if you live in Seattle and you just come up here and fish in the summer or something. You've got other opportunities; you are probably working at some other type of trade in the winter or whatever. There's no winter opportunities much here for anything, for anybody, except if you are on a federal or state payroll or have other types of things going on. But fishermen, in general, don't have much going on in the winter.

For my part, I was chided by a friend in Cordova for attending the Fish Prom, an annual September fundraiser sponsored by CDFU to raise money for scholarships. Teasing, he referred to me as a “damned yuppie.” Later, I asked several of those I interviewed about this distinction, which I had heard before in other contexts.

It’s just a different bunch of people [who go to the Fish Prom]. It’s not necessarily a bad bunch of people by any stretch. I wouldn’t say that. It is just a different group. They are ... yuppies. They’re granola bars.... They do their own thing. It is just a different group of people. It’s not the locals.... For the most part it is a lot of the people that are from somewhere else and they come up here and they spend their four to five months fishing and then they leave or three months whatever it is. It is pretty much that group of people. There is a handful of locals that go, but not very many.

I followed up on this perception of the Fish Prom being primarily attended by seasonal residents, finding that this was not entirely accurate. In retrospect, a majority of those I recall being in attendance and putting on the event lived in Cordova year-round.

Others seemed considerably more tolerant of seasonal residents:

There is a difference in them I guess, but everybody is different. Even in high school you have your group over here and your group over there. I don’t let it bother me. They can go do their thing and I will go do mine.

I am sure there is a certain degree of categorizing or classifying that happens just because they haven’t put their dues in, you know? They make their money and they leave, and you know that has to happen. We can’t finish the season or perform all the extra work it takes in the summertime without them. I think where they get most of the disrespect so to speak, would be in their erratic carrying on. They’re kids half the time. They come in and blow their money in the bars and get themselves in trouble and make a lot of noise and it is hard for them, too.

Well, the people who come for the summer and fish I think are recognized as friends for the most part ... I have a lot of friends that come and gillnet. They live elsewhere and then they leave.... You know, it’s nice when they are here. I don’t hold any resentment against them. They are good people, but in terms of having a major impact on the fabric of the community ... they never had it. So when they are not here, there is no loss. But there are



a number of barnacles here in this community, people that hang in. When conditions are not so good, you scramble to find solutions and they make contributions to the community and that's good. So, we are kind of accepting.... People that come in from outside for part time, God bless them. We will go about our lives when you are not here.

The following quote expressed an understanding of why some families might choose not to stay in Cordova year-round.

If they want to bring their money here and spend it, that's always fine with me. I know their reason for not living here [is] because it's really expensive and a lot of kids aren't like my kids, you know? ... For people [whose] kids recreate a lot in the outdoors, [this is a] perfect place, but what if your kids don't do that? So, they take them out ... a lot of people leave town because the opportunity, they just don't have it here. But, it was perfect for my kids. I can see their point. I certainly don't regret it because I am glad that my kids love it here and have grown up here, but I could see if I had different kind of kids that they wouldn't be happy here, because they miss the big city experience

Issues of exclusivity – bonding social capital – or “sourdoughism,”<sup>19</sup> to use

Alaskan terms, were apparent in several of my interviews:

There might be a little [resentment toward people who do not live here year-round], yeah. This sourdoughism is kind of endemic in Alaska. It's like, 'How long have you been here?' I think it's sourdough for a person who has been here a day longer than you. That kind of stuff goes on certainly, but I don't think it's much of an argument. You dislike people, who are only seasonal, who are telling you how to run your city. 'Oh well, thanks for your insight' (*laughing*).

What we have making the biggest noise are people who either 'A' don't live here at all and pop in and out when certain people blow the whistle and say, 'Hey we need you here to show up or need to make some noise about this issue.' Or 'B' they live here part time, and they spend their winters – six, seven, or eight months ... someplace else and still have a loud voice in dictating what should happen here. Or, they are very newcomers – they have only been here for two or three years.... I actually have quite an opinion about people who become very noisy in somebody else's back yard. I've lived here for [more than 20] years, and I have enough sense to keep my mouth shut sometimes and let people that have

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<sup>19</sup> The term “sourdough” refers to how long a person has lived in Alaska.

been here for generations let their voice be heard ... over those voices that are usually very soft spoken. I listen to what people think and that's why I love Cordova. I still love the beauty and what is here, but it is the people that make Cordova so wonderful.

Becoming integrated into the Cordova community, by most accounts, takes at least two to three years of living there year-round. Many of those I interviewed who were not born and raised in the town commented on this.

When I first got here, [I lived in Coast Guard housing]. Being up in Coast Guard housing is kind of a stigma. It is a little hard to break into the community. Later on ... as I got to know people and then especially after I [married] into the community so to speak I became real well accepted. It is a really nice community.

I followed up by asking this woman how long it took for her to become acclimated to the environment after she got settled in as one of the locals. She responded, "A couple of years." Interestingly, quantitative data collected in 1991 addressed this issue by asking people to respond to the question "Overall, how difficult was it for you to get used to living here?" (Picou and Gill 1995b). Almost three-quarters of respondents – 71.1 percent – indicated it was "very easy" or "somewhat easy. However, the remainder of respondents (28.2 percent) reported it was somewhat difficult or "difficult" to get used to living in Cordova.

Several interviewees recalled their experiences of moving to Cordova, stressing the importance of community involvement in becoming assimilated. These accounts also allude to the importance and recognition of social capital as they attempted to become part of the social fabric of the community.

It took me a little while to get to know the community because I am not a part of the bar scene. I wasn't a member of the church at the time. I just didn't get in with that kind of flow with the people when I first came here. It wasn't until actually I started having children [that] ... I started making

that community connection. I would say probably by the third year of my being here I began to realize what we had here in the people. I started seeing the networking that was done whenever there was a crisis in town here. Way back even then I saw the 'come togetherness' that there was.... I think that I kind of started fitting in here pretty fast once I made that connection.

I think it was after the people left in the summer [before I got settled in here]. I stayed on in the fall.... I got [in with] people who lived here all year around. The people I was working with in the summertime, they were transient. They worked and then they left. [I got] to know the people here in town and ... I just jumped right in with two feet [and got involved]. To really feel like I was a Cordova person, Cordova being my home, it was probably a good four to five years.... Our wedding was here in Cordova [after a couple of years].... But, to really feel part of the community and be involved in it, and take pride in it and say 'This is my town,' ... three to four years, maybe five to be established.... Newcomers that come to town sometimes ... if they don't join groups and organizations, they feel really left out. That's because they don't get involved and they don't just jump in with two feet.

The very first month I was here we got six feet of rain. I thought that I had gone back into the biblical times and God was trying to flood the world, but it dried out eventually. At first I thought Cordova was pretty clannish and small town and closed to outsiders, and I was the outsider as was everybody else who comes. That was definitely my first impression.

It seems in Cordova like there are some sort of time periods when a group of people will come and then those folks will stay and then in between others will come and go. There are these little cliques or groups that come in at the same time.

I would say Cordova slowly grew on me. It wasn't like I came to Cordova and went 'Oh my God, this is a phenomenal place....' It took a while before I really met people so I felt kind of isolated here.... I came by myself, didn't know anybody. I was trying to find a place to live, trying to make a place for myself in the fishing world with no contacts whatsoever.... I actually was kind of isolated and kind of lonely for quite a while until I really started meeting people. One of the reasons [I came here was] ... because I didn't want to live in a city at all, and I hadn't for years.... I felt like it took me a while to get to know people. But then it grew on me and grew on me ... as I got to know people in the community.... I really like the people here and the sense of belonging and the way that the community works together and being a part of the fishing community.

When I first got here, this town was quite insular and quiet in many respects among the fishing community peers.... Many of them were kind of threatened by newcomers and didn't like to see newcomers come in.... There were in fact, myself and three or four other people that all came here at the same time and ... several of them are still here. That attitude changed over time.... Where I am going [with this] is not toward me personally because I have become pretty much integrated as a respected member of the community. You see the same thing towards environmental groups and things like that today among a lot of fishermen. They think that the so-called 'greenies' ... are out to do us in and take away our traditional lifestyle of etc., etc. It's the fear of the unknown. I don't know what it is but it's kind of a scary situation when you see people reacting negatively toward things that in the long term probably have significant benefits for the area. That's not a direct analogy, but it's not unlike the kind of response that I had when I first came here being a little different and an outsider.

When I came up, I had to ... find out how locals ... did things, how to behave and kind of fit in. If you didn't like it, you could leave and go back to America. [Take the oil company guys, for example.] These guys come up and they've got their cowboy hats on and they're talking to each other and they don't know any of the locals and they got plenty of their own little group to associate with so they bring Oklahoma [or wherever] to Alaska and keep it here. They live Oklahoman. [When] I came up ... I turned into Alaskan. They don't turn into Alaskans. They're Oklahomans living in Alaska. A lot of times they didn't even like it up here, but the money was so good or their company sent 'em here and they really had to come. They weren't even here because they wanted to be here. All the people here prior to [the pipeline] ... were here because they wanted to be here.

I didn't find Cordova as closed a community as some people might I guess. I think I have lived other places ... that I might say were more closed. There are definitely ... the groups of people who [feel] you have to have been here long enough to have them take you seriously. My husband and I joke a lot when we go to public hearings and try to count how many people say, 'Well my name is so-and-so and I have lived here since so-and-so' (*laughing*).

Despite it being challenging for some newcomers to Cordova, one transplant who had lived there more than 25 years explained:

We let in outsiders all the time. We love new people... I'll show them around. I'll tell them the history of the town. It's so fun to meet people from new places and stuff and bring them in.

Most agreed that what might be considered “threats” of new people coming to Cordova are quite limited. This is articulated below:

There's some sport fishing going on now but it's like a gated community. You only get here through the ferry or a plane; your name is on a list somewhere (*joking*). There's only so many people that can come on the plane and so many people that can come on the ferryboat and there's only so many beds here in town that people can stay in. There will never be a big [influx of people]... There may be some more independent travelers, but you won't see any industrial tourism certainly, no cruise ships – the water's too shallow – and no tour buses because there's no road. And no local vehicles either, from Fairbanks and Anchorage, big population centers ... going to come blast water fowl and fill their freezer with fish.

I find the use of the term “outsiders” an interesting one, as it establishes a scenario in which it is up to the “outsider” to “get inside” the community. Further, this language provides a context for my later discussion about effects of the EVOS in that even *prior to* this technological disaster, outsiders did not understand Cordovans and their way of life. Considering this, Edelstein's (2000) argument that “outsiders just don't understand” social impacts of technological disasters may be especially relevant with respect to the EVOS. The narrative of a female commercial fisherman summarizes it well.

Anchorage is a very large city. I regard it as a necessary cancer... It is a service center. It is like any other big city down south. People have got a completely different mind set... We [as Cordovans are on] ... a different planet. We're not on the same wavelength... I'm not saying they're not nice, but we don't relate very well. They remind me of gerbils caught on little merry-go-round because they are ... trying to make their lives productive.... They can't stop long enough to enjoy things.

#### 4.9 “Is the Grass Greener Out There?” Positive Aspects of Living in Cordova

Clearly, for most of those I interviewed and observed, positive aspects of living in Cordova overwhelmingly offset negative ones. As a long-time resident told me:

There is some really amazing things going on in this town and there are some amazing people. It never ceases to amaze me the amount of talent in this little tiny town. There are phenomenal artists and maybe it has to do with being blocked in by our weather and stuff where you just ... feel like you need to have an outlet like that.... There are wonderful artists and then music ... the dance instructor that is in town now, she went to school in New York.... It's the same way with some of the artists.... There is a lot of amazing people here, and that is why I don't think that if we got a payoff that these people are just going to leave. They are here because they chose to be here because they want this kind of lifestyle.

This comment reflected significant human and social capital in the community, as does the following: “It's ... really [an] unusual sort of little town. It's full of all kinds of incredible people. I don't really question it, that I found this little out of the way place, 'cause it's not just another little place out of the way, this place.”

Others reflected on why they remain in Cordova.

I think, ‘Wow, I wouldn't live anywhere else.’ [My employers] said, ‘We know better than to move you because your town loves you.’ (*laughing*) I said, ‘Yes, I know that and I love the community and everybody in it.’ I said, ‘I couldn't leave. This is my home; this is where I want to be.’ And I have done many different things in my life.

[This place] served my needs. I was able to function as a human being here and get along. I fit in, you know? ... They must have had a need for a person like me, and so I got to stay.

My sister [who was visiting me from the Lower 48] has a disability and we were walking down to the boat and she spotted the dream catchers in ... the bead shop. She did an about face and went in there, and the next thing I knew we are going to beading classes making dream catchers.... They loved her. They took her right in. It was just really neat. It was just one of those neat little Cordova experiences ... that wasn't phenomenal, but was just really cool.

That's why the Dress to Kill party became such a big thing. It's all these women standing together in our differences and celebrating them and sometimes it really bugs you, but I don't argue with my girlfriends a lot on things that I don't agree with them because why? That's your opinion, cool, good for you. Do I press the issue? Do I feel like I need to fight the issue with them? No, I don't. I celebrate the fact that they have the courage of their convictions and I have mine, and we all go forth together. I think Cordova is like that in general. We celebrate our differences even though sometimes you wouldn't know it by listening to a conversation.

I could go live in the city. There are a lot of things about cities that are attractive on a sociocultural kind of basis. Every time I visit cities now ... I think I would probably be happy for six months or so. I would eventually start feeling like I am missing something important in my life by not having easy access to go hike some place quiet away from ... people in the cities.

I'm [mending a net] for [my friend].... We love [this guy] at our house and he's a really good friend of mine.... He's never charged my family one dollar for any kind of [work he's done for us].... I have argued with him; I've fought with him.... I've wrote him checks and sent it to him through the mail and he never cashes them; he throws them away. So basically when [he] brings his nets down to [me], I do the same to him, and it ticks him off. That's what's so cool about Cordova. I saw a lot more of it back in the old days than I do now, there is still some really, really cool people like [him] and he does that for a lot of people. There was a lot of those people back when I was growing up because I can remember my dad talking about those people.

I live here because I want to be here. We could afford to live anywhere we wanted to, so ... it's not for that.

[Sometimes you think] ... is the grass greener out there (*laughing*)? But this is a pretty neat community.... I've lived here for 42 years and I don't want to go anywhere. I want to retire here although I do want to get out [and travel some] (*laughing*).... My oldest [daughter] ... wants to come back here and teach someday.... I could see my [other daughter] coming back.... I can also see [my son] coming back.

For me it is kind of an ideal spot because this economy is based on responsibly managed, renewable resources.... Fishing is limited by permit to a set number of fishermen. There's only so many fish you can catch; and there's only so many people who can sell 'em.... So rather than a kind of false economy based on growth, you would have a true sustained economy that could continue in perpetuity so long as it is not mismanaged.

It's a great place for that. Cordova, of course, has an economy that is based on a renewable resource, fish.

It is the culture that always has hope for the next year, [a] fishing culture. You know ... next year it is going to be better. [Cordovans] do talk to each other and with each other and I think help each other out supportively.

[I can] walk down the street and know everybody and know their business and it's just great. [I]t was hard [living outside]. I am not a big city person. I like to go shopping to get my stuff and then go back home. I don't like knowing that there are a million people surrounding me; I don't like having to lock to my doors at night. I don't like having to worry about my kids playing in the backyard or [my daughter] going to school. I don't like traffic; I don't like having to wait. You get used to small town life.

#### **4.10 “The Land Binds Us Together:” Conclusion**

Although none of my interviewees claimed life in Cordova was idyllic prior to the EVOS, narrative accounts of the community suggest it was and remains a community with considerable social capital. The wife of a commercial fisherman who has lived in Cordova for more than 20 years recalled:

Except for the occasional difference of opinion or whatever it seemed like everybody got along pretty well, were really cooperative.... I would go down to the harbor and help at different times. It seemed like everybody really helped each other out. 'Course then that was a lot of the fishermen that had either been living here for years or had been coming up here for years from Washington and other areas. So the majority of them I would say helped each other out and looked after each other out on the grounds and in town, too.

Accounts of the community today suggest similar strengths, at least regarding natural disasters and personal tragedies:

There are so many battles being fought right now on every front that it is hard to think ... beyond those to a previous thing.... My general impression of this community is anytime there is any real tragedy or major thing that happens everybody bands together....Whenever somebody gets cancer or this happens or that happens and there are fundraisers everybody



comes and gives money. That happens all the time. This community always bands together about issues that affect the health and welfare of people.... That is just the general pattern of the way this community works.

I am very proud of the town in that when the chips are down they stick together.

Natural, built, and social environments are important contextualizing factors to consider when examining social capital in Cordova following the EVOS. They influence the community's reactions and responses to this technological disaster, particularly in light of the ecological-symbolic approach and RRC concept. Arguably, the subsistence lifestyle in which most Cordovans engage – Natives and non-Natives alike – to at least some extent represents social capital in a “pure” and rare form. As one woman put it, “We continue to be able to enjoy this because we are Cordovans and that is what we do.... The land binds us together and brings us together and keeps us together. That is why the oil spill for me was so devastating because you just think, ‘Oh my God what have they done to my land?’ The size, physical location, and relative isolation of Cordova also influence how social capital is manifested. Because of these factors, “evidence” of social capital or lack thereof is arguably apparent in the community. The question to be considered in the remainder of this dissertation is how the EVOS affected social capital in Cordova, how social capital is related to other social impacts resulting from technological disasters, and how changes in social capital affect or potentially affect communities in the wake of a technological disaster.

## CHAPTER V

### NARRATIVES OF THE *EXXON VALDEZ* OIL SPILL

#### 5.1 Introduction

The purpose of this chapter is to provide information to further contextualize qualitative findings presented in the remainder of this dissertation. Narratives of Cordovans regarding their recollections of the *Exxon Valdez* oil spill (EVOS) – where they were when they first learned the tanker had hit Bligh Reef; how they heard about the spill; their immediate concerns and reactions; actions they took immediately following the spill; the atmosphere in Cordova after the spill; and their activities in subsequent days, weeks, and months – offer additional insights into social impacts of EVOS. In particular, accounts presented in a number of narratives in this chapter express recreancy associated with the disaster. Ultimately, these comments will assist in addressing my research question regarding the relationship between social capital and recreancy.

Understanding various perspectives of EVOS almost 15 years after the spill require those of us not directly involved or living in the community of Cordova in 1989 to place the event in context with respect to social and economic conditions at the end of the 1980s, as well as the ecological-symbolic approach and renewable resource community (RRC) concept discussed in Chapter IV. As an Alaska Native in his mid-50s told me:

What you have to do realistically is ... go back to 1989, and you have to see what it meant to the community as a whole.... Probably the most important part of 1989, was [that it was] the culmination of all of our efforts – especially for seiners. We had built these hatcheries in the Sound in the mid- to latter-'70s, and some of us volunteered to put in time to build them because we saw a need. [They would] ... enable us to compete in the bigger market.... Here was this whole thing just starting to turn towards the primrose lane, so to speak. We were going to be fat and sassy after 1989. In '88 the run wasn't that big. We had gotten a dollar a pound. 1989 we were looking at the very minimum \$.75 a pound for pink salmon with a huge return coming back. The stars were lined up. You were ready to go.... That was the atmosphere. We couldn't wait for that season to get started. We were going to charge into that and start going some place. And when that oil spill happened and we started finding out what the repercussions of that was. You can imagine. It would be like you as a kid at Christmastime seeing your whole dog-gone living room filled with presents, and you're thinking, 'Wow ... I'm going to be able to get in there and really rip and tear and get all those dog-gone presents. They're just for me and I'm gonna have fun getting at 'em.' And then all of a sudden maybe you had a fire and they all burned up and you are just shit out of luck. That's the way we were. We were just shit out of luck.... I thought maybe we could turn the corner. Maybe this would be just a difficulty because we were survivors.... I was thinking in those terms. I never thought it would be anything like this.

Other comments revealed a sort of “you had to be here” theme, reflective of Edelstein’s (2000) notion that “outsiders just don’t understand.”

I don't know that people can understand it without being here and living it. A lot of things have changed ... especially financially.

Unless you have been there and see the devastation yourself it's hard to grasp or to even understand. I know if I were living in the Lower 48 it would be hard for me to comprehend. How could something like this be? You're telling me something, but I just can't fathom it.... I know people that have come up and have seen the pictures and have talked to people that have been through it and have got a clearer picture of what has taken place, to give them a better understanding of it. I know people were asking questions from the Lower 48 about, 'How bad is it?' ... But until people could actually see it [they couldn't understand].... I believe [people] in the Lower 48 are still talking about it. My own family is still wondering what is happening and [asking], 'How are you doing?' I said, 'Well, it's still there. It's left its mark.' And no matter how you want to erase it, you can't. It's something that you cannot erase because the marks are still

there. And if you go out in the Sound and if you did see a sheen of oil it brings back those memories that you want to forget, but still it surfaces.

I guess you would just have to tell the story about what happened and the situation. A lot of people don't realize.... They are in their own world.... This is a different way of life really, compared to being in the city [and] ... working your nine to five jobs.... We're dependent on the land and the water. I don't know how I'd explain it.

First you have to educate people about this area. You have to tell them what it is like, the history of the people that live here, how people make their living here. They would have to understand something about the people and about the area before they could understand anything else. Then you could explain to them about the types of damages that are still ongoing. You would have to just tell them the whole thing so they could get a proper perspective.... You can't do that by sitting down in a five minute conversation.

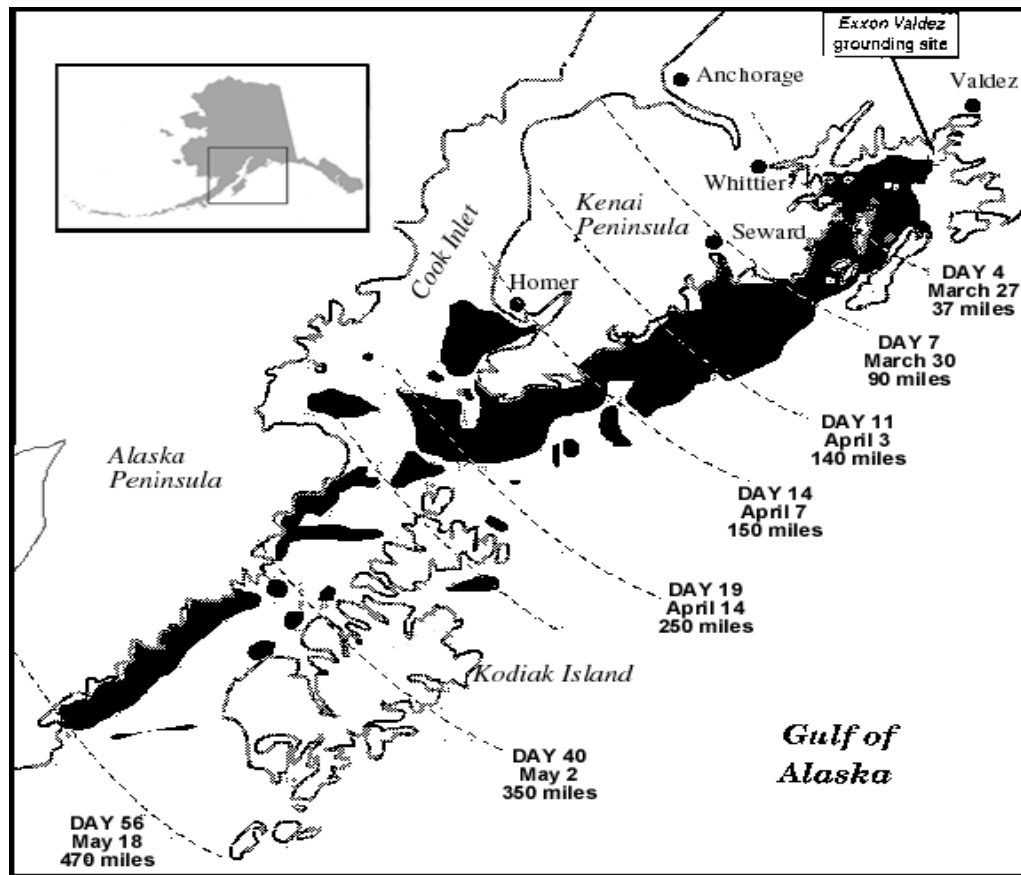
## **5.2 “Evidently, We’re Leaking Some Oil:” General Overview of the *Exxon Valdez* Oil Spill<sup>1</sup>**

Since the summer of 2001 after determining my dissertation would be a qualitative study of the *Exxon Valdez* oil spill, I have read dozens of accounts of the incident. Early on I wondered how I would describe the event – there are only so many ways to write about the grounding itself. Simply put, within the first few minutes of March 24, 1989, the oil tanker *Exxon Valdez* ran aground on the well-marked Bligh Reef in Prince William Sound (PWS), Alaska. The vessel was carrying 1,286,738 barrels of Prudhoe Bay crude oil; of these, 11 million gallons churned into the waters of the Sound – enough to fill approximately 125 Olympic sized swimming pools (see <http://www.evostc.state.ak.us>). Ultimately, oil from the supertanker contaminated more

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<sup>1</sup> Comment made via radio to the Port of Valdez Traffic Center by Captain Joseph Hazelwood early in the morning of March 24, 1989 after running aground on Bligh Reef.

than 1,900 kilometers of pristine Alaskan coastline from Bligh Reef to the village of Chignik on the Alaskan Peninsula (see Figure 5.1).<sup>2</sup> Indeed, there was nothing simple about this technological disaster that disrupted a delicate and vibrant coastal ecosystem resulting in the deaths of 250,000 seabirds, 2,800 sea otters, 300 harbor seals, 250 bald eagles, 22 killer whales, and billions of salmon and herring eggs (see <http://www.evostc.state.ak.us>).



\*From <http://www.evostc.state.ak.us>.

Figure 5.1 – Map of Geographical Extent of the *Exxon Valdez* Oil Spill\*

<sup>2</sup> For detailed accounts of the EVOS see Davidson (1990), Keeble (1991), or refer to <http://www.evostc.state.ak.us>.

As discussed in Chapter I, most research examining impacts of EVOS involves natural science, rather than social science. Initial concerns, even among residents of Prince William Sound, revolved around ecological impacts of the crude oil. Few gave much thought at the time to potential short- and long-term social effects of the technological disaster. On numerous occasions, I have heard Gill recount one particular field experience he had in the summer of 1989 when collecting social impact data in Cordova. Standing in the doorway of an elderly gentleman's home, he introduced himself and explained he was conducting a survey on impacts of the oil spill. In a somewhat hostile tone, the man quipped, "Well, why aren't you out there cleaning that shit up?" Gill replied, "Well, I figure there are plenty of people out there doing that but I'm interested in what's happening to the people." "You are?" said the man, his reaction softening, "Well, come on in."

Since 1989, scientists have been disputing not only environmental impacts of the oil spill, but economic, social, and psychological impacts, as well. These arguments are presented in a variety of forums, ranging from reports and books developed through government and privately funded studies (e.g., Cohen 1993, 1994; Dyer 1993; *Exxon Valdez* Oil Spill Trustee Council 1993, 1994; Fall and Utermohle 1995; Impact Assessment, Inc. 1990; Kruse 1992; Levkovitz 1990; Lord 1992; Loughlin 1994; O'Donoghue 1993; Ott 1994; Picou et al. 1997; Piper 1993; Skinner and Reilly 1989; Spencer 1990; Steiner and Byers 1990; Wheelright 1994), to research published in peer reviewed journals (e.g., Dyer et al. 1992; Palinkas et al. 1992; Palinkas et al. 1993; Peterson et al. 2003; Picou et al. 1992; Rodin et al. 1992; Short et al. 2004; Tierney and Quarantelli 1992), to accounts delivered through popular media, including books,

newspapers, magazines, video, television, radio and the Internet (e.g., Alaska Public Radio Network 1991; *Anatomy of an Oil Spill* 1990; *Black Tide* 1990; Davidson 1990; Egan 1989a, 1989b; <http://www.pwssc.gen.ak.us>; <http://www.evostc.state.ak.us>; Keeble 1991; Meganack 1989; *Outrage at Valdez* 1990; Phillips 1993; Rosen 2003; *Voices of the Sound* 1989). Many formal studies found their way into legal proceedings associated with the spill and findings from a recent report “could have bearing on the \$100 million ‘reopener’ clause of the \$1 billion 1992 civil settlement between Exxon and the government [and] a pending \$4 billion punitive settlement” (Ritter 2003). In short, different perspectives represent various social constructions of EVOS by a variety of claimsmakers presented via myriad claimsmaking activities.

Most commonly, those speaking on behalf of Exxon (now ExxonMobil) Corporation or representing similar interest groups contend damage was limited to begin with and furthermore, whatever damage was incurred has been either recovered or compensated for. Other “independent” scientists (i.e., those not being paid by ExxonMobil) argue otherwise. This trend continues, as evidenced in a recent article (Rosen 2003) citing a study published in *Science* and remarks by ExxonMobil Corporation representatives. The study’s principal investigator stated, “Everything wasn’t all right in July 1989, and it wasn’t all right for a number of organisms years after that” (Rosen 2003:1). The report’s findings were generated by combining results of a series of government studies regarding problems seen in sea otter, harlequin duck, juvenile salmon, and shellfish populations. Moreover, “Patches of oil that persist on some beaches release enough hydrocarbons to cause chronic problems that, for some species, continue even today” (Rosen 2003:1). As expected, ExxonMobil Corporation’s position remains

the same as it has since 1989. According to the company's Vice President for Safety, Health, and the Environment, "What science has learned in Alaska and elsewhere is that while oil spills can have short-term effects, the environment has remarkable powers of recovery" (Rosen 2003:2). Furthermore, ExxonMobil insists, "Those few beaches that still have oil represent only about 25 acres of the total 5,000 kilometers of Prince William Sound shoreline.... That amount is not affecting fish or wildlife" (Rosen 2003:2).

As contentious as debates remain among claimsmakers regarding biological impacts of EVOS, there do seem to be some "accepted" figures regarding the status of injured resources in Prince William Sound (see <http://www.evostc.state.ak.us>). As of August 2002, species identified as "not recovering" include pacific herring, cormorants, common loon, harbor seal, harlequin duck, and pigeon guillemot. Among injured resources that are classified as "recovering" are clams, intertidal communities, killer whales, mussels, marbled murrelet, various wilderness areas, and sediment. Resources identified as "recovered" are bald eagles, black oystercatchers, common murre, pink salmon, sockeye salmon, river otter, and archaeological resources.

### **5.3 "Before the Spill" and "After the Spill:" EVOS as a Benchmark for**

#### **Cordovans**

For residents of Prince William Sound and Cordova in particular, EVOS represents a benchmark in time, a lifestyle and lifescape altering event. Prior to the spill, life in Cordova was measured with respect to the 1963 downtown fire, or "before the



earthquake” and “after the earthquake” of 1964.<sup>3</sup> Cordovans now reflect on events in terms of “before the spill” and “after the spill.” During her interview, one woman in her 50s began to say “before [the earthquake]” but caught herself and explained: “I always want to say ‘earthquake’ because all my life you talked about before the earthquake and after the earthquake. Now it’s ... before the spill [and] I am always catching myself because I want to say before the earthquake.” An Alaska Native commercial fisherman commented:

The spill is a ... mark in time. It’s a reference point and everybody here knows what you’re talking about. I could travel and go to other places; we go to Hawaii occasionally and talk to people about the *Exxon Valdez* and they look at you like, ‘What the hell are you talking about? There was an oil spill in Alaska?’ ... We had the ’64 earthquake. Before the earthquake, I think it was the ’63 fire when half the town burned down.... Benchmark, that’s the word.... It’s a reference point in time.

When I asked if there had been other benchmarks in his life since EVOS, this same individual replied, “September 11<sup>th</sup>.” Like the terrorist attacks in New York City and Washington, D.C. on September 11, 2001, the EVOS for Cordova irrevocably impacted lives of those who most directly experienced it:

It will be something that will definitely change the face of the community forever. I have always found you become a real Alaskan if you survive one of our many disasters, whether it’s earthquakes, fires, or floods, and in this case an oil spill. Cordova has known all of those disasters. Cordova has known major downtown fires, a major earthquake, and now a major technological disaster.

This is not to say Cordovans dwell on the subject of EVOS. In most cases people have done their best to move beyond the event, despite ongoing litigation, economic hardship due to failed herring fisheries and changes in market conditions related to

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<sup>3</sup> See Lethcoe and Lethcoe (2001) for more information about impacts of the 1964 earthquake on Cordova.

increased competition from farmed fish, and uncertainty about remaining environmental damage and its recovery. An Alaska Native in his late 50s expressed the following:

It doesn't come up very often. We don't dwell on it. None of the people that I know ... talk about the spill [unless] there is a certain subject that is directly connected to the spill. Other than that we don't talk about it. We just talk about your everyday problems, you know. What are the fishing prices? When is the next opener? What kind of problems are you having with your boat? What are you going to do this fall? ... [We don't] ignore it; it is just that you don't want to dwell on it. It is like picking on a toothache. You keep poking at it and then you say, 'Why am I doing this?' just keep giving myself pain. But it is always in the back of your mind, I suppose. As long as there is still no settlement it is going to be in the back of your mind. I think whatever kind of settlement that occurs whether it is good or bad ... [a] high settlement or low settlement, I think overall it is going to be good. Because the people will say, 'Okay it is over with. We can start over.' I think whatever happens. I think it will be good. That is my feeling.

The wife of a commercial fisherman had this to say when I asked how often the spill or something related to it came up in conversation:

Almost never. If there is not paperwork that I have to fill out or something like that we don't talk about the spill at home.... It doesn't even come up unless the kids are doing a report or somebody else brings it up. I can't think of any time we have sat at the dinner table and brought up the oil spill.... The only reference I can think that comes up to it is that there is 'before spill and after spill.' Like in time frame sometimes somebody will be talking about something and you will go, 'Yeah, but that was before the spill....' So that does come up once in a while, but the spill itself doesn't unless someone like you is asking about it.

Contrary to those who might consider Cordovans and others "whiners" regarding their situation in the aftermath of the EVOS, no one I interviewed, spoke with, or overheard during my fieldwork in Cordova blamed all of their financial or other "woes" on the oil spill. In fact, a number of people I interviewed expressed concern about how their comments to me would be perceived by outsiders. In one of my journal entries

(October 29, 2002) I noted this apprehension by one inquisitive commercial fisherman who ultimately agreed to be interviewed:

*He wanted to know who I was going to interview and I explained the confidentiality issues. He then asked about why, what kinds of personal info people were being asked. I told him a few [questions], and how the info could be as personal or superficial as one chose. He got it. He's very interested in being interviewed, but seems a bit anxious about it, too. He reiterated that not all of the problems [in Cordova] are caused by the spill and Exxon.*

Later, during the formal interview, he related the following:

[My immediate thought right after the spill was] that my life was basically screwed.... I was only [in my early-20s] when it happened, and I thought, 'Oh geez, your life is over.' In retrospect I look at it; I was [young]. I could have started over then. Now I am [close to 40] ... and things have changed tremendously in fishing. A lot of it has to do with what happened that day. I wouldn't say everything, but I would say part of it.

Understandably, no one is certain about the ramifications of the spill, as this

Alaska Native woman stated:

It's impossible to imagine what life even without the spill would have been because there were so many of these other forces that were going on that were coincidental. Who knows how things would have been without it? ... Even had the spill not happened, Cordova would still look vastly different as far as our economic future. Our world market wasn't the same, it was just a bad timing thing ... and our world market had left us at the same time.

As the previous quotes reveal, Cordovans recognize there were and are other factors influencing their lives today, including economic and market issues, broad social issues, as well as personal decisions (such as choosing not to work on the oil spill cleanup, over-capitalizing with funds earned from working on the spill cleanup, and other life circumstances). Another individual I spoke with articulated the situation as follows:

We had a secure market with the Japanese who were willing to pay ridiculous amounts of money for our product. We had this bubble that

happened in the '70s. It started in the early '70s and it went all the way through the late-'80s. The demise of that bubble happened at the same time that the *Exxon Valdez* happened. Not to say it's causal, but it was a contributor and definitely coincided with some real market forces that changed our world as well. The real major disaster is that [the oil spill] distracted us from our business, which was catching fish. And it's the one and only business of Cordova.

The spouse of a commercial fisherman was somewhat sheepish as she commented:

I just don't think about things like that like maybe other people do. When people are getting really down on the oil spill and everything that's happened to them, that was 11 years ago.... You can't blame your troubles right now [all on that]. It's not all oil spilled related. Look at the town. If you take a look at just one thing this year, the city says that sales tax is down 40 percent. That is a chunk and it's expensive to live here. That's your choice. If you want to live here, don't complain about it.... If you really hate it and you don't want to spend \$5.00 a gallon for milk or \$4.00 for a loaf of bread, go someplace else.

A long-time Cordova community leader and businessperson who is not involved in the ongoing EVOS litigation stated, "I don't want to lay every [Cordova] community problem on the *Exxon Valdez*. It's really easy to do that because it's a nice culprit out there. But, I can't personally go there."

Even in light of such perspectives, however, a situation seems to have emerged in the immediate wake of the spill in which people were compelled to make rapid and perhaps ill-informed decisions about their futures. Confusion and uncertainty about cleanup activities, potential long-term environmental impacts of the EVOS, and legal mechanisms for compensation, combined with a lack of understanding regarding general social consequences of technological disasters associated with the emergence of a corrosive community likely contributed to this. Again, Cordovans' reactions were no doubt exacerbated predictions of strong returns of pink salmon for the 1989 season and

the hard work many had put in over a number of years to help ensure success. As one commercial fisherman put it, “1989 was supposed to be the queen mother [of seasons]. It was supposed to be big.”

The statements of many I interviewed confirm that this was a common perception contributing to the overall context of the EVOS:

That year we had had the biggest prediction of returning fish for the prior ... decade and many, many people spent a lot of money that winter getting equipment redone, repowering boats. I'd rebuilt my seine skiff with a new engine; it was just a devastating thing to learn what was [supposed to be a great season] ... later unfolded as a failed fishery basically.

[We were] scared to death and hopeful [right after the spill].... We were on the verge of what we had hoped, not just we; me and [my husband], but we, the collective fishing community, of having just an incredible season. We had worked ourselves back up to a point where we were close to the kind of prices and runs that we had in the early-80s, which were really profitable, and we were really excited. We were kind of at a turning point ... or at least [my husband] and I were personally, making great progress that season, if we would have had a strong season. Everything looked like we were going to [be really successful], the predictions, and the market.... The Japanese economy was really strong right then, extremely important for our market. We were starting to really get things going in the fresh marketing down in Washington and taking fish down there, unfrozen, getting their quality recognized. The Fishermen's Co-Op was just sort of peaking at that point.<sup>4</sup> [It] had a lot of participation. The fishermen had pulled away from the bigger processors like Saint Elias and North Pacific which were Japanese controlled and they were setting their own market because there was enough of them fishing for the Co-Op. So that was exciting to have that more independent entity to be involved with.

We are just asserting what might have happened had there been no spill. I am confident that we would have been better off had there been no spill, but we may have still failed to recognized the threat of farmed fish. We still may have been snowed under by events. I can't quantify it.

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<sup>4</sup> The Co-Op to which she is referring is the Copper River Fishermen's Cooperative, which filed for bankruptcy in 1992 (Reynolds 1993:345).

Another woman reflected, “I think if the spill ... wouldn’t have happened, we had a total different plan.... The future looked pretty bright in the fishery, and now it’s pretty scary really.” One fisherman summarized the situation:

[The spill] took over people’s lives. From my perspective, probably the biggest negative of the spill was that it took over my life and it took over my wife’s life. It frankly made it impossible in ’89 and in the ensuing years to make objective decisions about managing your life. Going into ’89 the permit prices were at the highest levels they had ever been. Fish prices were the highest levels they had ever been. The expectations for the future were bright.... You might decide that this was a good time to invest in something else or go do something else or... who knows? But once the spill happened and you start getting engaged in these things, you lose these options. You lose your ability to recognize what’s happening to some extent in the external world because you are so focused on all of this *mêlée* that’s going on right in your own backyard. I think the fishermen pretty much got sandbagged by this whole price decline caused by world production of farm salmon ramping up at such a rapid rate.... It was obscured from their view ... a lot of it, because of the timing of the spill. If you had not had this event that took up so much of your general time and energy, you could’ve perhaps seen that the trend was starting to go in the wrong direction and you might not want to be investing in new equipment, new boat or whatever. In fact, you might want to be selling out and looking at other opportunities for business decisions.... You know what I am saying there? It clouds your perceptions of the externalities that you could otherwise have seen more clearly and maybe made different or better decisions for your life. Once the disaster happens, you are kind of stuck in that mode.... So that’s actually one of the biggest problems that the spill caused, that it changed people’s focus on having a clear insight in happening and clouding things and a lot of these other issues.

The comments of others I interviewed reflected similar ideas.<sup>5</sup>

R1: It’s a pretty extraordinary group [the fishing fleet] and it’s puzzling to most of them, as it is to me, how we got in this situation where we are so over our heads in terms of being able to materially effect our future.... I am sure there are a lot of people in all walks of life and all areas down below [in the Lower 48], there’s a lot of middle age people that are making that same examination of the economy [who] ... have been sort of swept off the table. It’s time for you to scramble. That’s happened society

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<sup>5</sup> During one interview I had occasion to witness exchanges between two friends, both long-time commercial fishermen. R1 and R2 refer to two different individuals.

wide. It isn't peculiar to our industry, but I guess maybe having the presence of [the oil spill] ... it's been something that's worked against us rather than for us. Just having somebody to blame it on [Exxon], other than ourselves, causes us to not take charge of whatever is necessary.

R2: Uh huh.

R1: So, having a bad guy [Exxon] isn't necessarily a good thing in terms of [that].

R2: Oh you bet. I agree. I agree. I think it took a lot more time to catch on to farm salmon because we were so busy blaming Exxon.... [and] we have had more problems than that in our industry if you want to [really think about it].

This narrative of an Alaska Native woman, a former commercial fisherman offers additional insight on the subject:

At first people thought the spill actually was responsible for the downturn in our fishing industry.... [They thought], 'Give us a few years after the spill and things will return.' The world had changed in the meantime. We had gotten distracted ... and our world market had changed while we were distracted with the spill and it consumed our lives. The world market had completely changed, and we didn't have a chance to deal with it front and center. I think now people realize not only did the world change over night, but it changed for good over night. [It is] not a change that happened and we will just go back after we deal with this to the way it was.... It is gone forever. I think people realize now that Cordova isn't the town it once was. [After the spill] there was more interest in this area. We were sort of off the beaten path and people didn't know about Prince William Sound and they didn't know about the Copper River Delta. Suddenly we became ... in the crosshairs of all the national environmental organizations and all these world news organizations.... We suddenly became in the cross hairs of the world. That's something [that happened] as a result of the spill, and it accelerated some attention that we haven't had a chance to learn how to deal with locally.

In his economic assessment of the EVOS, Cohen (1997) essentially concurs with these previous narratives: "The oil spill's fundamental longer-term economic consequence has been its tendency to divert attention away from the real problems plaguing southcentral Alaska's fishing industry" (p. 155). Among these problems he cites

rising operating costs and failing market conditions, including the introduction of farmed salmon. The EVOS litigation further distracted those involved with the fishing industry through the mid-1990s, by which time the southcentral Alaska's fishing industry lost momentum and its previous competitive position as "producers in other countries used the opportunity to consolidate their achievements and refocus for further market expansion" (Cohen 1997:155).

As noted in the methods chapter, my reasons for being in Cordova quickly became common knowledge. I am certain my mere presence reminded some individuals of things they had either purposefully tried not to think about or had successfully managed to avoid discussing for years. Still others seemed to welcome and some even sought out the opportunity to speak with me, finding it "therapeutic" to talk about and comforting to know they had not been completely forgotten. As one woman, a non-fisherman put it:

You are following through ... 'cause it ain't over and done with. It is still ongoing, and there is therapeutic value in [what you are doing]. There really is. I firmly believe there is. It has helped me. Thank you for letting me talk to you. It has helped me a lot just being able to talk about it.<sup>6</sup>

Another younger woman, though admittedly skeptical about any impacts studies like mine, Picou's, Gill's, and others' really have, considered the following:

You are collecting people's stories and that can never be a bad thing. You are probably getting things that people haven't talked about ever or haven't talked about in a long time, and it is probably cathartic in some ways for a lot of people to talk about.... Representing my dad, which he would get mad at me for, I would say that ... it is probably validating at some deep down level for him to know that people still care and it is still getting talked about. As soon as it gets pushed back on the burner, nobody talks about it anymore then it doesn't exist. Sort of like ... any other

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<sup>6</sup> Notably, this person is not involved in EVOS litigation.



tragedy. People want to talk about it because they want to remember ... they don't want to forget. But, another tragedy comes along and it disappears. In some ways [what you are doing] validates what happened for a lot of people.

Finally, at the conclusion of her interview, the wife of a commercial fisherman told me, "I think what you are doing is really wonderful and important, if for no other reason than it gives people the opportunity to talk. Talking is healing."

The remainder of this chapter is dedicated to describing EVOS experiences of the 48 individuals I interviewed in 2002 and 2003. As before, voices of Cordovans best express their recollections of the event, their reactions to it, and their perceptions of how it affected the community as a whole.

#### **5.4 "What's Your Worst Nightmare?" Narratives of Hearing About the EVOS**

Most Cordovans with whom I spoke exactly recalled where they were and what they were doing when they first heard the *Exxon Valdez* had hit Bligh Reef. For those old enough, it seems to be much like remembering where they were when hearing about the assassination of John F. Kennedy. For younger generations, it is likely how September 11<sup>th</sup> will be for them in the future.

You betcha [I remember where I was].... [There are] three things that ... I'll always remember: Where I was when Kennedy got shot; where I was when I found out about the oil spill; and where I was when 9-11 happened.... [I got a phone call from a friend].... They were down south and he said, 'Hey, it's just on the news! A tanker hit Bligh Reef....' I woke up to that phone call.

[I remember hearing about the spill] just exactly like I remember the day when President Kennedy was shot. The two stick in my mind as the only two world events that stopped me in my tracks that I will forever remember. When Kennedy was shot I was in fifth grade walking down the hallways of the school and I can be there just [thinking about it].... When

I heard about the *Exxon Valdez* I was in a marine supply store in [Washington State].... I had spent about an hour shopping when I came up to the counter with the items. I had used the same salesman all through the winter ... so I knew him well. He said, 'Did you hear what happened in Prince William Sound?' [It was] like the earth stood still, and I said, 'What.' [I knew] what he was going to say. There was an oil spill. And I [was] dead inside. Everything kind of stopped. It's like when you hear someone that is dear got hurt or died or [was] in an accident. I remember leaving the stuff on the counter and saying, 'I will have to come back for this. I have got to go right now.'

As one female commercial fisherman told her husband after hearing about the spill on the evening news, "Our life, as we know it, is over." Another former commercial fisherman expressed it this way: "I had just lost my step dad that was very close to me and it was like that.... Our lives would not ever be the same." Although more than a decade had passed since that Good Friday in 1989 when I conducted my interviews in 2002 and 2003, the years had done little to diminish most peoples' memories of hearing about the EVOS:

I was home when I heard about the spill. A good friend of mind called me up and he said, 'What's your worst nightmare?' He woke me up out of a sleep [so I said], 'Getting a call from you would probably be one of my worst nightmares. What's happened?' He said, 'Well, it's happening. They just had a oil spill.' I said, 'Come on, that's...' He said, 'Turn on your TV.' So, I went and turned on the TV.... and sure enough, there was the picture of the *Exxon Valdez* up there on Bligh Reef. How it ever got up there is a mystery to everyone.

We were standing here and my brother ... came running up and said that a tanker had hit Bligh Reef and it was dumping ... a lot of oil. It was over a foot, foot and a half thick covering quite a few square miles and spreading. So we turned on the radio to see if we could get the news and called people around town to find out what was being done to clean up the damage that this oil was going to do. What struck me was, my brother ... had lived with our father the most. He was very, very close to him.... And the first thing he said when we found out the magnitude of the disaster [was] ... 'I am glad dad is not here to see this.' I never thought that he would say that he would be glad to have dad dead. It really was a shock to me. It proved how strongly he felt and [it was] true.

I was actually upstairs in my office on the computer and it came across on the computer. This was about 4:30 in the morning or something like that. It was pretty shocking.

I remember exactly where I was. I was ... working on a herring seine.... The herring fishery opened in the 1<sup>st</sup> of April and we were trying to get our last few jobs done.... Somebody came in and said, 'Oh, there was an oil spill.' We just kind of like blew it off and somebody came in about an hour later and said that there was a pretty good size oil spill at Bligh Reef. We just felt like it was just an oil spill. We'll clean it tomorrow. Somebody came in right after that and ... It was somebody [who was] kind of a long-time Cordovan, with some emotion and [he] said that the tanker had been on the rocks for so many hours and that there was so many gallons rushing out of it and it was just a huge, huge deal. And I remember the feeling of it. I remember everybody that was working on that net, it was probably about six of us there that was working on that net, everybody just kind of like ... their mouths just kind of fell open and their needles dropped to the ground and I remember the building scattering for a while.

It was interesting to hear accounts from the wives of commercial fishermen regarding their responses to hearing about the spill. One woman and I had the following exchange:

R: I was in bed and [my husband] was watching TV and saw it on the news and woke me up. And at the time ... it didn't really hit me as far as a major catastrophe I guess because ... I hadn't been involved with fishing that long.... So it didn't really hit me ... that hard until he started talking about it and he actually flew and saw it from the air when it happened.

I: So it was important enough to him that he woke you up to tell you about it?

R: Oh yeah, definitely.

I: Do you remember him being upset?

R: He was extremely upset. Emotional, I guess. Not screaming or anything like that. I can't remember exactly.... He was upset but quiet.... [He] didn't say really a whole lot about it until after he flew and then he would just say how devastating it was and how much [oil] there was.

Her husband's recollection of that morning follows:

It was about 3:30 in the morning. I was watching CNN, rocking my son because he couldn't sleep. And he would have been ... [less than a year] old.... We were in the front room and I saw a blurb come on CNN that said the tanker had hit Bligh Reef in Prince William Sound. I just kind of blew it off at the time and went to bed, until about 8:30 that morning when my cousin called me and he said, 'You better get up.'

Similarly, the spouse of an Alaska Native recalls her husband's reactions to hearing about the EVOS:

We were at home. We actually got a phone call at 6:40 in the morning from my husband's right-hand man, a seine partner. I have never seen [my husband] move so fast, and he has to respond to many emergencies. But he took his time to get his coffee and get dressed. He had clothes on him and he was down at the CDFU [Cordova District Fishermen United] office. And [he] said, 'What do we do and when do we go?' ... I actually think it was a day or a day and a half before Exxon said, 'Okay, this is what we're going to do.' It was the hardest thing I have ever watched him go through ... just wanting immediately to put attention on it and not being able to go.

According to her husband:

God, I don't remember exactly where I was at. I'm sure I got a phone call in the morning and I immediately went to the Union Hall, the fishermen's union, and there was a bunch of people there up in arms about, 'Oh we told you this was going to happen and that's why we got the injunction against the pipeline, and this is going to jeopardize the fishing, and we don't know what to do, all that.' So, there was a pretty large gathering of people at the Union Hall shortly after it happened.

A number of interviewees were outside Cordova at the time of the spill, traveling, making preparations to return, or actually returning for the pending herring season.

I was on a plane flying over the Sound, coming back from a trip to Anchorage when I heard about it.... It scared the crap out of me. I knew it was bad, instantly, because you ... can't have a little spill with a tanker. I knew it was bad. I had no clue how bad it was going to be, even though I knew it was going to be bad.

I can tell you exactly where I was. I don't think there's one person here that won't be able to tell you *exactly* where they were. My wife and I, were at a ... shop in Seattle buying [equipment].... We were sharing a house with [a friend] and we came back home and we walked in the door, and he said, 'They just spilled five million gallons.' They didn't know how much it was [at the time]. 'They just spilled five million gallons of oil in Prince William Sound.' And I said, "Oh bullshit, that's a mistake." There is no way, maybe 500,000 or maybe 5,000 gallons or whatever, but not five million. I said, 'There is just no way. That is a big mistake.' And he said, 'Well, I don't know. It's on the news; it's everywhere....' So that's how I found out.... and we were kind of stunned.

I had been doing [Parent Teacher Association] stuff and I came home having just completed this huge project.... It was ... Easter weekend. It was Good Friday and [I was] coming home to relax for the weekend and walked in and turned on the answering machine. [I] went over and was filing my papers, hanging up my coat, listening to the [messages]. One of the messages was: 'I just heard about a tanker spilling some oil up in Alaska and wondered if it was anywhere near where you fish.' It was a cop mom. Second one was: 'I just heard on NPR (National Public Radio) that a tanker hit Bligh Reef....' Then a third one from a man who ran a tender and the two of us were really good friends. He was in the process of buying a boat to tender.... [He had] heard about the spill and was wanting me to call him back to tell him what was going on. Obviously it freaked him out.... I had been at school all day so I hadn't heard anything. So I immediately was running around turning on the television and of course it's just regular programming. We didn't have CNN. We didn't have cable.... So then I turn on NPR and it's part of the news. I am freaking out trying to get some news, not able to. I called CDFU and they had had a plane that had gone out that morning ... There was a little bit of news, but not much.

I was bringing my boat back [to Cordova].... I [had] saved ... money to rebuild my [boat].... [I] lengthened [it], put a brine system in, [redid] the hydraulics, radars, all that stuff – wiring.... I spent [\$130,000 and] all winter away from home working on [it].... We launched her on March 22<sup>nd</sup>. I figured I'd pay for it [during the season]... We left [for Cordova] either the day of the spill or the day before the spill.... I can't remember the exact date.... I'd have to look. But anyway ... I knew about it first in McPherson Pass.

We were [not even in the United States] when the spill happened. We didn't know about it until about two weeks after it happened because we heard from somebody on the trail just as we were a day or two away still from civilization.... They learned we were from Alaska and said, 'Oh

have you heard about the spill?' We were like, 'What spill and where was it?' And they said, 'Oh it was some place up north.' We were thinking Prudhoe Bay, Fairbanks, sort of up north in Alaska. It wasn't until I think five days after that that we finally got back to [a city].... And the first thing that told me that it was in Prince William Sound was seeing [a copy of] ... *Newsweek* that came out with Prince William Sound on the cover (*laughing briefly*). It was very surreal.... We went to the American Library ... and discovered that they still had videotapes from the immediate days after the spill.... They were about to tape over that tape and said, 'Oh sure you can watch it.' So we sat and watched the Cordova High School Gym and people getting up and testifying and heard the Exxon people saying, 'We will make you whole.' So I am sitting in a room [on the other side of the world] (*laughing*).... I was very, very upset, and ... then we were stuck ... for another three days after that because planes weren't leaving. I just couldn't enjoy being there anymore. I was writing people post cards just to do something. (*Laughing*).

One non-fisherman related her reactions when hearing about the spill:

[When] then the oil spill hit ... I was actually outside on vacation ... I was skiing.... [I] should have just come home because I was a basket case.... I would be at the gondola crying and everybody not knowing what was going. I have to go home (*mimicking crying*). I was just so upset. It was so bad... I was ... having lunch with a girlfriend that used to live in Cordova when the broadcast came over the radio that the oil spill had occurred and then I flew out that evening to Seattle and I probably just should have come home.... All I did was cry for three weeks. I needed to come home.... [I felt this] incredible sadness... It was like disbelief.... [I was watching people I knew on television] ... knowing I should leave and go home.... And we didn't. We took the kids and we finished the trip.... We had a good time skiing too, but not fully. Your thoughts never strayed. [Someone would ask], 'Where are you from?' 'I'm from that place where the tanker just went aground.' That's what all the news was talking about. Then I would start crying.

Two individuals I interviewed were not living in Cordova at the time of the spill but almost immediately returned upon hearing the news.

My mom told me. I was surprised that she called because we had been fighting and arguing at the time so I was kind of surprised that she called.... [Then] I turned the news on. That is what she told me to do. So after seeing it on the news I was just completely shocked and I had to get back to Alaska. That is all there was to it

I was in Anchorage.... I was studying.... God, how in the hell did I find out? I am trying to remember. I saw it on the news and [I thought], 'Oh my God...' You see the pictures of that tanker just stuck on the reef at that point. They were just showing all these [images].... It was just continuous, non-stop. You just see [the] *Exxon Valdez* there just stuck on the reef and all the oil coming out of it and the helicopters.

Understandably, a number of people I spoke with did not clearly remember where they were when they found out about the spill or how they heard about it.

I was working, I know that.... I don't even remember for sure where I was working.... Oh, I know, I was bartending when I heard about it.

No, I don't [remember]. I don't know ... I just know, 'Oh boy wow...' [I]t just kept getting worse and worse and worse. It affected us here because my husband was not fishing there yet, but that's where he fished. He fished on the other side.... I don't remember where I was. I don't remember. I couldn't even tell you the time of day it happened. Well, it happened at night. I know it happened at night.

I think it was just another day basically.... I couldn't tell you what day it happened on. I know it was March but I have no idea what day it was.

When the spill happened I was [at home with a new baby].... It was a really trying time.... [My husband] probably told me about it first, and ... I am not exactly sure how the news got to us. I remember pacing back and forth in front of the TV and CNN, walking back and forth holding a baby with tears in my eyes, knowing some of the stuff that was going on here.... This is as the days went by and it wasn't getting cleaned up and stuff that they were downplaying on TV and walking back and forth hollering 'liar' at the TV and feeling like throwing it out the window.

As might be expected, not recalling their whereabouts was especially evident among interviewees who were in their mid- or early-teens at the time of the spill. One thought she was in school when it happened. Another was not sure how she heard about it and did not correctly recall the date of the spill:

It was that next morning [when I heard about it], 'cause it happened really late at night on the 24<sup>th</sup> (sic). The 25<sup>th</sup>, early in the morning before we even get to school, we heard about it – probably [through] radios and phones.

Although she did not exactly remember how she heard about the spill, the narrative of this young woman clearly articulated her emotions as well as those of her parents on March 24, 1989:

I can't remember. I think I woke up in the morning.... I can't remember the details. I just remember that it took me awhile to understand. I knew what had happened, but it took me a while to understand exactly how serious it was. Yeah, a tanker ran aground and yeah it's spilling oil ... but it took [longer for me to understand]. I think it was shock. How can you comprehend something on that magnitude? But, I could see in my parents' faces that it was likened to somebody dying. It was horrible to see somebody like my dad who has been to Vietnam and had [been] traumatized downright speechless and crying. It's just ... there's no words.

The herring season was about to start and people both in Cordova and outside were busy preparing gear, equipment, and boats as several narratives indicated:

I was in the midst of building [a top house for my boat] when this whole event came down. When I first heard about it on the radio that morning, I wanted to dismiss it because my focus was getting my job done. I had this big project under way.... [But the spill] wasn't dismissed. It wasn't dismissible.... The immensity of it became more pervasive. I was on the Board at CDFU at the time – Cordova District Fishermen United – and from about that day on, we became increasingly involved in the spill and less and less and less involved in our personal projects. I remember quite well where I was.

I had the boat out of the water and the engine torn out and I was putting a new-style engine in it and a whole bunch of new hydraulics ... massive. I was spending ... \$60,000 to \$70,000 on the boat. And then the oil spill ... I remember hearing about it on the radio going in one morning to work on the boat. I heard there had been an oil spill in Prince William Sound.... I remember seeing a friend who used to fish up here ... a boat had pulled her over.... 'Hey, did you hear about the oil spill in the Prince William Sound?'



It was just a very shocking, shocking time. I don't think at the time ... [we understood]. It was so beautiful. The sheen on the water was beautiful. It was like a rainbow.... The herring fishermen were coming through the Sound, and there was all this sort of disbelief going on with them too. There were these good hardworking people and they're Alaska's great gamblers. They gamble that the herring are going to be there. Before they have always suited to wait it out ... to see when the fishing was going to open. We all just kind of had a chance to breathe and said 'Hmmm, what's going on here?' We just simply didn't know.

Initially, many experienced shock, disbelief, and uncertainty associated with hearing about the spill. For many with whom I spoke, the magnitude of the incident was not immediately apparent. It took some individuals days, weeks, or even months to understand the gravity of the situation in the Sound and the potential impacts on their way of life:

I think everybody [in Cordova] was kind of in a state of shock.... I don't know if it was shock or denial.... Some of the events I remember specifically.... I first I heard about it Saturday morning. The next day was Easter. It was Easter Sunday, and I remember going to church and going to the Easter egg hunt. It was a beautiful day.... It was like nothing had happened.... I don't think [anybody] really realized how bad it was. So, we went to church and we went to the Easter egg hunt just like it was a normal Sunday.... I think it was [not until] several days later like Tuesday that people started realizing, 'Wow, this is bad. This is really bad....' I'll just never forget that ... just going about our business.

I woke up in the morning and somebody had given me a call or something and said there was an oil spill. I kind of laughed ... because we always knew it was going to happen, but not knowing that it was really a huge disaster. I thought maybe ... it was some little, little oil spill, you know?... I got down [to Sitka] that night and phoned back and found out that it was really a huge disaster. It seemed like every day for weeks the ... scope of the event kept going up in my mind. Not ever having experienced an oil spill, or really thought through or understood what it meant, what it was going to do to the environment at the time, it didn't seem like that big a deal. But then I didn't know a tanker was going to leak out 11 million gallons.... And [I] had never really thought through what it's going to do to the environment.

I remember my sister telling me that it wasn't that bad, that I was imagining stuff ... and the next day she called me and she said, 'Oh, maybe you were right. It is kind of major.'

[I was] laying in bed. A friend of mine called me up and told me. He said, 'Turn on CNN.' And they were showing it more and talking about it. [My initial thoughts were] that it wasn't really true. It was just kind of off in some distant land that you're watching this happen – you see that it always happens somewhere else. You never expect it to happen here and here it is right up at your back door. [It was] kind of hard to accept or to really see the effects of it. [It] never really sunk in until I went on the spill for wildlife rescue, and that was the first part of April.

We were getting ready for herring pounding when I found out.... I think I heard about it at work rather than at home.... I don't recall what my initial reaction was.... I can't remember. I just expect right at the time it was something like (*pauses to think*) ... you are not sure if it is real or not or what really happened or how good or bad it was.... I was kind of more optimistic about it at the start compared to a lot of people, which changed.... Some things I can be really pessimistic about. So I don't know why in that particular instance I wasn't.... I was fairly optimistic. I think if it happened again or something similar happened again I would be way more pessimistic.

I was on my way to [breakfast] that morning when I heard that there was an oil spill. I didn't pay too much attention ... until later on in the day.... [Then] I realized that this was pretty serious.

I was down at the docks in Seattle and we were all ... getting ready to come up to go fishing. Somebody said, 'Oh yeah, there was oil spill out on the Sound.' They didn't know much about it at the time. It didn't even dawn on you the magnitude that it was going to be. There have been little spills before and then we were starting to see the news and ... what was going on.... I was really kind of a mess. And just to get up here and then find out how extreme it was.

I was still at home laying in bed reading and [my wife] called me ... and said ... 'The big one has happened. There's a big oil spill. Turn on the news.' It was horrible. It was just terrible. It was totally devastating. That kind of grew on me actually.

I couldn't believe it because there had been lots of other little accidents in the Sound.... tragedies ... hunters being lost, or boats going down, or ... just accidents of whatever source.... I couldn't believe how big [the oil spill] was.... There had been a ship [that] had lost power before, and they

had to do a rescue.... But once it gets telling on the news, a little bit of news I was getting, and the telephone calls ... once I had gotten that information I could see that they weren't stopping it. This was not just a little splash (sic) in the pan incident. This was a big, big deal. By the time I got here, my [family members] ... were literally hysterical. They were saying, 'You don't know. It is a BIG spill.' They couldn't tell me.... They couldn't come up with words for the enormous size of it. I was not getting it. I was trying to remain a little calm.

Oh God ... I think initially I had no idea of the impact. I really did not understand the significance. At that point, I had spent quite a bit of time in the Sound, but I really didn't comprehend how bad it was. It was just like, an oil spill? ... But I don't remember really being really shocked by it or overwhelmed or anything like that.

This wife of a commercial fisherman indicated it was not until 1999, 10 years later, that the impacts of the EVOS really hit her:

I don't really remember [where I was when I found out]. I remember getting a phone call and I think ... [my husband] called me and told me about it. I just remember being totally shocked and not even realizing the extent of it. I don't think any of us really did until a little bit later and like, 'Oh my gosh, this is huge' (*laughing*). Within a few days we all kind of went, 'Wow....' A lot of people went out flying and looked at it.... The hardest part for me was the 10<sup>th</sup> year anniversary. That's when it really hit me. I think I stuffed a lot of it [down inside].

In keeping with a response that might be expected according to the ecological-symbolic approach, a relative newcomer to the community I interviewed – someone who did not live in Cordova at the time of the EVOS – said:

I don't remember it. I don't think I paid all that much attention to it on the news.... (*pauses briefly*) I was aware of it. Maybe I watched it. I know I watched it on some of the tapes, but I was so far away from it. It wasn't my community. I can empathize with the animals, but there was more focus on the animals than there were the people. What I remember is feeling for the wildlife not he people of the community until I moved here.

## 5.5 Initial Reactions to the Spill

Initial reactions to the EVOS as recalled by those with whom I spoke in Cordova ranged from frustration, anger, and outrage to sadness, concern, and uncertainty. Frustration, anger, and outrage, as well as sadness, generally emerged in response to the failure of spill response efforts. Long-time Cordovans, particularly commercial fishermen and others who fought the pipeline, had believed there were contingency plans in place should an oil spill occur. Many believed a spill such as EVOS was inevitable, but had little choice but to rely on “the system” (or little experience to suggest they do otherwise) to protect the environment and their livelihood, as evident in this quote by a commercial fisherman. His narrative is suggestive of concepts presented in Perrow’s (1984) *Normal Accidents*:

I was pretty devastated. I fought for years to keep it [the pipeline] out and we fought hard to try to ensure that the best safety measures were in place.... All the promises that were made about high technology being used were basically not ever fulfilled and... almost the inevitability of it... I always felt that if it came, human error would cause a spill at some point in time. Historically that has been the case with these kinds of systems. I just felt outraged that we hadn’t been dealt with more fairly and recognized immediately what the impact was going to be on our fishing. And I don’t want to sound prescient, because I certainly wasn’t, but I think it was common sense. I’m [publicly] quoted [on the subject prior to the spill].... So there was a question in my mind, although I really actually didn’t believe it, I guess. If I had really believed it I probably should’ve moved out of here and gone and done something else (*laughing*), but it just seemed like the logical extension of history to expect that the worst is going to happen and it is going to be based on human error. And that’s exactly what caused the *Exxon Valdez* to go onto the reef. This drunken captain would leave it in the hands of an over-tired and under-trained third mate.

Many others also recounted being opposed to the pipeline being built:

I was against the pipeline. I never worked for the oil companies. I was against it.... We had predicted that this was going to happen.

When the spill happened it was your worst nightmare because you had lived with this [possibility] of it maybe happening. [We in Cordova] were out there way early saying, 'This is going to happen. Don't build it here....' [Then nobody wanted to say], 'See, we told you so' because it was just too gross of a thing. It was too beyond that. That was just too petty of a thing to come across anyone's lips. It was just like getting kicked in the gut so hard.

We tried our best when they put [the pipeline] into service ... to try and have a safety clause in there. They fought us nail and tooth. We never really succeeded in any of that because of the amount of clout in the oil companies. They were powerful people and we really have very little say, but we did our best.... We wanted ... a response system set [in place] but we never successfully did get it. We knew eventually that it would happen. It is part of nature. It is part of life. It is part of us being humans.... Nothing happens that we don't create some time in our life. When you are in it long enough it is going to happen to you. We knew the tankers going out of the Prince William Sound had had other near misses. It was just a matter of time because they didn't have nothing put into the system to ... control the tankers.<sup>7</sup>

These previous narratives are suggestive of recreancy and betrayal on the part of the oil industry, as does the following recollection:

Before there was even a pipeline, when they were just starting talking about building the pipeline, we had politicians coming to Cordova promising us, 'There will never be an oil spill because of technology today.' That was in the late '60s.... There were promises made to us and of course look what happened. Just like we said it was going to happen. So, not only do we have fourteen years of fighting this, we have 34 or 35 years.... I was a young kid and I still remember all the meetings.... We did not want that pipeline in Valdez.... But we didn't win. Now we have this, and it is not fair.

Another lifetime resident recalls being reassured about the safety of the pipeline by oil industry officials when he was a young boy:

Those people came to Cordova and ... they guaranteed the school the kids in the school that there was never going to be an oil spill. [They] pretty

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<sup>7</sup> For an excellent account of CDFU's unsuccessful quest to keep the Trans-Alaskan Pipeline terminal from being located in Valdez, see Payne ([1985] 1989).

much guaranteed that there was never, ever going to be an oil spill. And sure enough here's the oil spill.

Certainly, these “broken promises” contributed to feelings of recreancy among Cordovans regarding the EVOS.

Broadly, concerns in the immediate aftermath of the EVOS as recalled by Cordovans included uncertainty about the extent and long-term ramifications of environmental damage, resultant impacts on PWS fisheries, personal- and community-level economic impacts and, in some cases, concerns about social issues resulting from the spill. The response of one lifetime Cordova resident, a commercial fisherman and Alaska Native, spoke to many of these issues when I asked about his greatest concerns immediately after the spill:

*(Sighing)* The future. What was going to happen? Not knowing what was going to happen. Knowing that the oil would never be cleaned up and [not knowing] what the long-term effects were. What's going to happen in my lifetime down the road? I figured I'd fish until either my son was old enough to take over or if he wanted to do something else just fish until I was an old man, be able to retire – use my fishing seine permit as a retirement fund and the boat. All that's gone.

#### 5.5.1 “The Emperor Has No Clothes:” Frustration with Spill Response, Corporate

##### Paralysis, and Recreancy

I wasn't as concerned about the overall environmental impact at the time. I just didn't know. I had quite a lot of confidence that it would get cleaned up because ... I certainly knew that there was a plan in place for cleanup and the plan would eventually kick in and eventually things would get done.... Truth itself was a victim. I don't know at what point I realized that ‘the Emperor has no clothes.’ There is no cleanup. [It took me] ... probably a month or six weeks to ... figure that out.

Initially, as this quote reflects, most people I interviewed believed the spill would be contained and cleanup efforts would go smoothly. It was a reasonable assumption, given that they had been told for years about oil spill contingency plans in place in Valdez. Moreover, the weather in Prince William Sound was uncharacteristically calm and conducive to containment efforts, with no wind or storms typical of March. One woman recalled watching television coverage of the spill and thinking, “The weather stayed good. It was like okay, okay this is good. This is good. The weather is still staying good. There is still hope. They can get in there and contain that oil. Another woman who was in high school at the time recalled, “The weather was beautiful, calm, nothing. No wind ... not as bad as it could have been with the storms and ... the wave action.”

Other interviewee comments suggested early confidence in authorities and spill response plans:

[That Friday] it was a beautiful day, like one of these days we have had recently.... I guess I was naïve that I believed what the oil companies said, that in fact if there ever was [an oil spill] they would be there and they would clean it up. I heard on Good Morning America about it that morning. I thought, ‘Oh it will be fine.’ It will be taken care of. I had lunch with a friend of mine ... and we said, ‘Oh yeah we really believe that everything is going to be alright.’ By that evening we knew everything wasn’t going to be all right. That is how it was.

Through the initial process, [I] was pretty much giving everyone the benefit of the doubt. I figured it would work out okay, and it wouldn’t be a problem, and it would get cleaned up. I wasn’t really doom and gloom about what it was going to do to the Sound at all, or like just, ‘Oh my God. this is horrible,’ ’cause I think I didn’t really have that good a perception of what it was doing.

The first few days ... [were] beautiful days. It was cold and sunny and beautiful.... That Monday or Tuesday ... it started to blow. Then it was, ‘Holy shit.’ Then the oil was no longer sitting around the tanker ... being dealt with. The wind started to blow and then it was just unbelievable. It was moving so fast and hitting the shore.

I went to work.... We showed up at 8:00 in the morning and there is always a coffee crowd down there. It is a local hangout for the fishermen. I got down there and everybody was in a big tizzy. 'There has been an oil spill.' [I thought] 'Oh, okay, there has been an oil spill. We will deal with it.'

Cordovans I interviewed remained hopeful for the first several days after the tanker ran aground. They wanted to believe the spill would be contained and environmental damage minimized. However, they were quickly disappointed and disappointment rapidly became frustration as these narratives demonstrate.

Initially I just thought 'It's a big oil spill, but it's only a lot of oil in a small space.' Perhaps it could have been contained. Nobody really knew the inadequacy of the cleanup equipment, the training material, and personnel at that time. As time went along it got to be a worse and worse feeling, just totally sinking.

You might get a hold of somebody [on the phone in Cordova] and [they would say] 'Nothing is happening. They are not containing the oil....' And Exxon is just saying all this bullshit. 'We will make you whole. We are doing this.' ... They didn't even have a contingency plan. They had nothing. They had nothing to clean this oil up. They had no equipment.... They had no plan. They had nothing.

[I do remember] thinking, 'Why aren't they doing something about it? Why aren't they? Why did it take so long to get the stuff out there to clean it up or the booms around it to contain it?' It was going so fast. They didn't know how fast it was going, pouring out of there instead of trickling.

They always said they were prepared, but they weren't. They were caught with their pants down. Alyeska had no idea how to possibly contain something like that.

[People here] were just kind of frustrated, mad at Alyeska and Exxon for not having the containment booms or the pumps or the skimmers or anything that they were told that they were supposed to have. By law, they were supposed to have all this stuff and all this stuff was just junk. And then everybody was just scrambling to try to come with new ideas to soak up this oil to bring it in.... [It was] just frustrating. You couldn't do anything about it. Just watch it happen.



Initial belief in “the system” was fostered by Exxon’s early promises right after the oil spill to “make Cordova whole.”

I am sure you have heard this one many times, but within three days after the spill there was a big town meeting in the high school, and the CEO [of Exxon] promised that they would make Cordova whole again, and everyone [said], ‘Let’s see it.’ He was at the company about two more weeks after that, and then he was released in a short period of time. He was let go, and that was pretty much how they did it the whole time we had encounters with them: a big smile and a handshake up front, and the second their backs were turned, ‘screw them.’

I was telling [my husband] that you were coming over here today, and he says, ‘You remind her that when this [happened], Exxon came down here and they had a big town meeting.’ [He wanted me to tell you that] ... they said, ‘You should be happy that it’s Exxon because we’ll make it right or we’ll take care of it....’ In his mind, it’s still very strong. They didn’t do anything to make it right.

These corporations that are making, not just grossing, but making after their expenses billions and billions of dollars.... [Why don’t they] take care of those people, if they say they’re going to make them whole again. Don Cornett [Exxon official] should’ve been held to his word.... In Cordova High School Gym Don Cornett, Vice President of Exxon ... said, ‘You don’t know how lucky you are it was Exxon that made this oil spill. We promise we will make you whole.’ That was 14 years ago.

That moron ... whatever in the hell his name was, stood up there and said, ‘We will make you whole....’ Those words are emblazoned in my mind. He was just lying through his teeth, although I think he probably believed what he was saying. I will say that about him. He probably believed what he was saying.

I remember [an Exxon official] saying, ‘Be glad it’s Exxon that spilled the oil. We will take care of you and we will make you whole.’ That’s what they told us, ‘We’ll make you whole again.’ They don’t realize how much damage they have caused, how many generations they have affected, and how many lives they have destroyed by what they did.

Feelings that Exxon failed to fulfill its promises are still evident today as indicated by an informal comment directed to me in the Cordova Harbor: “Yeah, I keep waiting for Exxon to make us whole.”

Comments of this variety highlighted anger, frustration, and sadness regarding the recreancy of involved entities. Indeed, there was as much blame to go around as there was oil spilled from the *Exxon Valdez*. Initially, Captain Joseph Hazelwood was an easy target for blame; reports of him drinking prior to the departure of the ship and not being present on the bridge when the tanker collided with Bligh Reef quickly emerged (see Keeble 1991). Others blamed Alyeska for their lack of preparedness and spill response. State and federal officials were not exempt from finger pointing, either. Most of the comments relayed to me considered Exxon the primary responsible party. Frustration at the lack of response by Exxon, Alyeska, and government officials eventually turned, for many, into anger and, in some cases, outrage.

Hazelwood was so fucked up.... He knew he was going to have to run the boat.... I don't know how many hours after the fact [it was] when they finally gave him a blood alcohol test. Who knows what really happened. Only those people on the boat really know what happened, but rumor has it the first mate was a coke freak and the other guy is an alcoholic. What a great pair of people to have running a huge thing like that. And then Exxon didn't have a plan. They had nothing. They had nothing. That is just what blew me away.... They didn't have anything. They didn't have anything. They had nothing.... So this three day window that we had when the weather was good to contain the oil, that just slipped away.

[My husband] was really mad. He was really angry because ... they voted on whether there should be a pipeline, and we have discussed it since then. We may have even discussed it at the time [in 1989] or he may have said something at the time that he was really upset because they were supposed to have guarantees in place, and that there were safeguards, and that this could never happen, and that he was leery to start with.... For it to happen was his worst nightmare coming true. He was really upset, all of us were – just trying to figure out what to do next.

Two years before that a tanker had lost power off of Montague and they had spent 20 hours trying to get power to this tanker before it hit the rocks on Montague. It's not something that you didn't know might not happen at this point in time. When the pipeline had been put in the fishermen had brought up these issues for them. 'What happens if?' .... Then as the

details unfolded of how it happened [it got worse]. Probably the saddest thing [was] that [there were] contingency [plans] ... but none of the materials were there to [contain it].... There was no boom. They had to fly boom in from Arabia, Saudi Arabia. There was nothing here. There was nothing in Alaska. There was nothing in the states. Most every kind of thing had to come here had to come from Europe and the Middle East to try to contain it. It just wasn't anything here.... I thought there was supposed to be a plan in place.... It was so sad.

For quite a while they didn't do anything.... Exxon and Alyeska and all that. So then everybody starting getting really upset, going, 'Okay, we got fishing boats. We got nets. We can start doing something.' People kept going over it ... and nothing was being done. So I think it really upset the community of Cordova. [People were] saying, 'Nothing's being done. This is our industry. This is our livelihood and we need to act on it and we need to act *now*, because the weather, we can't guarantee good weather. This is the time to do it, now.'

As many people as possible were helping with what was available, because there was nothing available to clean up the oil spill. They were trying everything. [The equipment] had been in and out of storage too long and it wasn't hardly usable.

There were periods right after the spill when there were all these arguments ... between the Coast Guard and Exxon on how the cleanup should proceed and et cetera and they had a lot of opportunities. And then the wind came up and it blew all that stuff over on the west side and a lot of opportunities were pretty well gone at that point. Once the wave action builds up, you don't have many opportunities to clean anything up.

We were in shock that they just couldn't go and [contain it].... We were shocked that they had to go to the Chain of Command. They had to go all the way back to headquarters, and then they had to have a board meeting. This tanker is sitting on the rock with the oil running out of it. We just could not grasp that. They should have had somebody in charge in Valdez, and it should have been immediate. Everything should have been figured out long before the oil spill ever happened. It should've already been written on paper and there should have been somebody in charge and they should've taken complete control immediately instead of having to wait four or five days or six days. Then they started to do a little bit. If we had any kind of normal spring, it would have been very traumatic. They wouldn't have been able to leave and pump the leftover oil out of *Exxon Valdez* into that other tanker. They wouldn't be able to recover any of that oil; the oil spill would have been twice of what it was.

When the disaster happened they were not ready to deal with it, and they wouldn't let the fishermen who were familiar with the territory, know how the tides run, they just wouldn't let them help. They had this big ring around the Bligh Reef and the boat there, and they wouldn't let anybody help. People were just begging them. 'You've got to let us do something. Let us do something...' and they wouldn't. And then the weather got bad. Then the oil started spreading, and I am just [thinking] ... this is your worst nightmare. It was horrid (*crying*).... it was bad. It was really bad... And I couldn't do anything.

A pilot who flew over the *Exxon Valdez* while it was still impaled on Bligh Reef commented with tones of disbelief about the lack of response to the accident even to this day:

Oil was still gushing out and bubbling out of the side of the tanker and nobody was there yet. There was a couple fishing boats. The tanker was stuck on rocks and a big wad of oil [was] going away from the tanker, drifting away towards the southwest. We just circled around there a bunch of times, took a couple pictures.... [then] I went back home.

Another fisherman recounted his own efforts, as well as reactions from those he spoke with outside about spill response activities:

R: About two days after the spill I flew up here ... [and I talked to a guy who] said he had just gotten in from being out there [on the spill]. He was tending the boom that was around the *Baton Rouge*, [which was] along side the *Valdez*, and somebody leaned down from the ... deck of the *Baton Rouge* and said, 'You guys ought to get some navy boom.' 'Cause all they have here is some little yellow boom like what you would put around a sunken skiff in the harbor.... The next day I got on the phone and talked to this Lieutenant ... at the Pentagon. This Lieutenant told me, 'Yeah, we are dying to send the stuff. It is all ready to go. We are just dying to send it and nobody seems to give us a call....' There is a whole long list of people that I was talking to everyday for about a week, and at that time they were going, 'We can't believe that Exxon's not just telling us, go baby go, get your act together. Head up to the Prince and change the oil on your tugboat cause you got work to do.' Just sort of crude, elementary things that you think any office that had spilled that much oil should be doing.

I: And you just took it upon yourself to do that?

R: Well I made connections.

I: So you just got on the phone because you needed to do something?

R: Yeah. I didn't really have anything else to do.... It was for about a week there that Exxon had gone into this corporate paralysis and just didn't do anything and sort of sat on their hands. And these people I was talking to were describing how they had had experience [in] the Gulf of Mexico where there had been an oil well blow up.... These people I was talking to were amazed they weren't being put to use.

The following discussion between two commercial fishermen, long-time friends, tells a story of their frustration with EVOS cleanup efforts.

R1: The first night we were still kind of getting [feedback from the Coast Guard that] 'It might take three weeks to clean up. It's no big deal....' Then to see it just continue to mushroom as far as the damage, the extent ... and then to have so little response have people out there working. Exxon was claiming, 'We have X amount of boats out there on the spill,' but you see the spill boats that are sitting on the anchor waiting for...

R2: Instructions....

R1: Or here in town, waiting for call outs or out there actually working. What they were doing was a total joke as far as any cleanup.... As an example, towing oil to a bay that they had decided they would use for storage because they didn't have any storage for the picked up oil.

R2: So they boomed off the side of the bay.

R1: ...and used the bay for storage. That was painful to see. But then, to see these boats working to go out with boom, and corral oil and bring it up and put it this bay behind the boom, and then to see when the tide went out the boom hanging from the shore down to the water with 10 feet in between and river of oil coming out so that you knew, 'Yeah these boats are working. Yeah they are accomplishing something.' But what they are accomplishing is doing nothing because it is coming out in the next tide. Then they are going to collect it again.

For the most part, Cordovans agree that cleanup efforts by Exxon and VECO were of little value.<sup>8</sup> In fact, as the following narrative reveals, many believed cleanup activities did more damage to the environment and to the community than the spill itself:

[In] '92 we were still suffering; there was still cleanup going on. Cleanup just really wrecked things. In so many ways I think clean up was as bad or worse than the original oil spill. It seemed like it was opening wounds – especially with the money and who was participating and who got what contracts. It was really kind of disgusting all the way around. As soon as the cleanup finally stopped, which wasn't cleaning up anything other than maybe Exxon's image, things started healing.... Things started getting more back to normal. The most important thing is people could start concentrating again [on their lives].

#### 5.5.2 “This is Never Going to be the Same:” The Environment, The Fisheries, and The Community of Cordova

Concern for Prince William Sound – reflective of the community's ties to its pristine natural environment, as well as people's dependence on renewable natural resources and subsistence – was apparent among virtually everyone I interviewed.

There were people that heard about [the spill] that hadn't been in the fishery for a few years that immediately came up. There were a lot of people that came back or just dropped their lives and came back because of their feeling for the Sound.

According to one Alaska Native, a non-fisherman, his greatest concern in the days and weeks following the spill was:

The damage it was doing. It wasn't the money so much. People weren't really thinking about [money].... I wasn't thinking about money. I don't know if ... any of our people were thinking about money. We were more thinking about what it was doing to the water – because we called it ‘the day the water died’ – ... and how it was going to change our life.

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<sup>8</sup> Veco International, Inc. (VECO) was the primary contractor retained by Exxon to manage spill cleanup operations (Keeble 1991). One of my interviewees joked, “VECO stands for ‘Victims Employed Cleaning Oil’” and told me they had t-shirts made with the slogan.

Natives and non-Natives alike had similar questions. The following comments reflect great uncertainty about the future, much like sentiments expressed by residents of other communities that experience technological disasters (e.g., Centralia, PA; East Swallow, CO; Grassy Narrows, Ontario; Legler, NJ; Love Canal, NY; Three Mile Island, PA). Again, because of their close ties to the natural environment, most people first recalled being worried about the impacts of the EVOS on Prince William Sound.

[My greatest concern was] what's going to poison the Sound and what's going to happen to our fishing and our ... way of life [and] our subsistence foods? Is this going to be a place that you can't even live anymore? Are we going to have to move away? Is this a Three Mile Island kind of deal?

Mainly I was just worried about the Sound. I had no idea and nobody else did ... what would be left.

I was definitely concerned about the environment because I was out in the Sound for over four months, and we walked on a lot of those beaches.... [It was] unbelievable. I definitely got the sense that this is never, ever going to be the same.... There were some bays that were hit that were directly on the path and they were packed with oil. They were hit much harder than other places.... We got to go to Sleepy Bay and I just realized, 'This is never going to be the same....' I remember that being in my head.

It was kind of hopeless. There wasn't really much you could do. All you can do is mitigate something that size; you can't really be very effective, really at all. You can kind of deflect it a little bit, but that's all. The fishermen threw all their efforts into trying to save the hatcheries, but ... there are so many wild streams out there; there is nothing you can do.... There is no way you could boom off all the beaches.

At first everybody that I could see was trying to figure out what to do and how much damage had been done. Everybody's concern was ... 'What is it going to affect? How many animals it is going to kill? Is it going to come to Cordova? ... Is it going to make it this far? Is it going to make it to the Copper River?' was one of the largest concerns besides the loss of life of anything.... Plus of course everybody was concerned about whether there was going to be herring, whether there was going to be kelp, what areas were affected ... would there ever be any fishing ever again ... and how were we going to survive if all of our fisheries were taken away...?

This whole town, all the economy, is generated from fishing. That's it.... There is not anything else. This is it.

A local businessperson recalled having other environmental concerns:

I had at that time concerns of a [businessperson] more than for the environment. For example, [we had to change the cleaning supplies we used to] get the oil out [that was tracked in by people]. [I thought about how those chemicals were] going into the water column somewhere, and there were just sort of basic gut level problems.

Those I spoke with – especially commercial fishermen and their spouses – also recalled great concern regarding uncertainty of their lifestyle as it related to the fisheries in Prince William Sound:

[My greatest concern] most definitely was ... 'What is going to happen next?' The cleanup period was one thing, but it was the uncertainty of what was going to happen with commercial fishing and our lifestyle and livelihood. It was ... always the number one concern.

We lived fishing. Basically that's what we did. We fished herring, gillnetted, and seined and so we were pretty worried about ... what the effect [was going to be]. There was a lot of oil spilled, and just the effect of what that would do to ... [the Sound]. 'What are we going to do? Are we going to be able to fish? Are we?' That was pretty much our major concern, what we were going to be doing in the next ... year.

I don't know that I had any [concerns] that were the 'greatest.' I just was concerned about what the impacts would be [on] ... commercial fishing. That's how I supported myself and my wife – fished. We didn't know how this was going to impact things. It's a lot of uncertainty.

[My] greatest concern [was] ... the degree of impact. What happened? What actually happened? We had a lot of concerns.... We had instituted an organization.... It was called the Salmon Harvest Task Force. It was begun then [to determine] how to conduct the fisheries. [That was a big concern].



A lifetime Cordova resident and commercial fisherman in his mid-40s recalled:

R: I remember that day [of the spill] very well ... I remember the reality of looking ... into [the] future ahead, to what could possibly happen and what was going to happen to us and all those kinds of things.

I: So your greatest concern at that point was for the fishing industry?

R: Yes.

Another commercial fisherman who has had to move outside for financial reasons he saw as being related to the spill remembered: "I was really worried. My family was young. I didn't know what would happen with commercial fisheries since I was totally dependent on them.... There was a lot of uncertainty." Similarly, an Alaska Native man in his 70s who had been fishing all his life relayed his initial thoughts when he heard about the spill:

I figured ... there goes our seining. We used to fish Valdez Arm all the time. For seine that is right where we fished. We spent all of our summers [there]. I said, 'Well there goes that area there and that [area] ... down towards our hatcheries.' I said, 'If it gets in the hatcheries it will destroy our hatcheries....' But then at that time nobody knew how drastic the oil would affect the fish or the herring or whatever it was. As time went on it seemed like it got worse and worse. [My greatest concerns were] how our fish were going to survive, and even by releasing hatchery fish we didn't know if they were going to survive either. To a fisherman it is just the fish. If we don't have the fish then ... we just don't survive. We were just lucky enough that it didn't come on the Flats with the red fisheries.

For many commercial fishermen and their spouses, concern about potential loss of the fisheries quickly translated into financial terms:

I was worried financial-wise, but nobody really knew what it was going to do. So it was a concern, but it wasn't a big concern. I am an optimist pretty much. I always try to look at the best before the worst, so for me it was, 'Well, things will get better, or fishing will still be okay,' ... I try not to look at the worst of things. I guess the biggest thing would probably have been financial ... worrying that [my husband] was still going to be able to fish ... the rest of his life or however long he wants to.

[My biggest worry was] whether we were going to have a livelihood anymore. Everything depended on our fishing season. That's what got us through the winter. So if you see all of the sudden your fishing industry just go, especially the herring and the salmon, you are wondering 'How the heck are we going to get through the winter, let alone raise kids for the next 10 years?' For a long time there all we had to live on was whatever I made myself on wages. Without the fishing that really hurt.

I think my greatest concern was how much oil is going to be dumped out, and how much of it is going to go straight to the bottom. Because the oil is heavy and it will sink to the bottom. [I was worried about] the after effect of it and what it is going to do to this community and what its basically going to do to my livelihood and that was my fishing.... If I can't go fishing, what's going to happen to our prices and what's going to happen to our permits? Before that ... we were in hog heaven because we all had permits going from \$150,000 to \$195,000. We thought, 'That will be our retirement [money].... We will have ... at least some kind of retirement.' [With] the price of fish at that time you could make an income. Before [EVOS] we really didn't worry about money because we always knew that it was going to be there and we took it for granted. [After the spill we knew] it wasn't going to be there anymore. Before that we always knew we had a job. We never worried about how we are going to provide for our family. We never really worried about ... if we are going to have a price [for our fish], and we had a pretty strong unit at that time.... My greatest worry was, 'What's going to happen to my livelihood?' ... And we see what has happened to my livelihood.

First you had four or five days of that oil spill and the ugliness of it and the sick feeling that I had and I wasn't sleeping at all. And I was wondering how I was going to make a living.

One young woman I interviewed who was in high school at the time of the spill had been counting on income from commercial fishing with her father during the summers to pay for her college tuition:

I did fish with my father, which [I expected] would pay for my college education. [That] was the plan. So, yes, I did have a scare basically going, 'Oh no. Now what do you do?' We know what crude oil is. We grew up in Alaska. We really don't, nobody knows the real affect that it has until it really happens.

Understandably, people's perspectives changed over the months following the oil spill, as suggested by the comments of one resident fisherman when I asked: "When did it sort of sink in, the magnitude of the potential impact on the environment for you?"

Almost apologetically, he replied:

Not right away. The oil spill affected me differently than maybe a lot of people. I grew up pretty poor, so I've always kind of been running away from poverty. My initial response wasn't feeling bad for the sea otters and the birds. [Instead] it was, 'Am I going to be able to make a living? Am I going to be able to go fishing?' When it became evident in a few days that this was going to have some impact on making a living, then my focus shifted to getting to work ... on the cleanup.... I was reacting probably for ... most of the first summer just trying to figure out ways to keep making a living. [It] didn't really hit me until half way through the summer, several months after the spill ... how much wildlife was getting killed and how much damage it was going to do the fish and resources that we rely on.

This man did not grow up in Cordova, but had spent probably half his life fishing in PWS. Another interviewee, a seasonal resident and commercial fisherman with close to three decades in the fishery essentially reported having "no" concerns while working on the spill cleanup:

R: That is kind of a tough question.... I don't know what my greatest concerns were. I think there was a certain amount of [*Exxon* keeping us busy], being very effective of just paying, just buying us off.

I: Did you realize that at the time?

R: No I don't think so. Not as much as I did afterwards. I just felt like we had a job and we were making a lot of money so we just kept doing it. It's pretty hard when you are getting paid for nothing to feel too bad about it.

I: How do you feel about it now? Would you have done anything differently?

I: Not really, no. Because I think basically ... there was nothing to do. There was nothing that I could have done that would have been anymore proactive than I was. And so, no. Basically no, I don't think so. I would

have done the same thing, as long as they were giving away money. I knew that this was a bad situation and any money you could get would be a good thing. So the only thing ... that I would have really done differently if I would have known is I would have taken every bit of that money and put it somewhere and got the hell out of here. Which is a pretty dramatic statement for somebody who loved doing this. But if I would've known the way things were going to go, I would've just taken the money and run.

An elderly Alaska Native woman described her initial reaction to hearing about the spill as follows:

I don't think I thought very much of it. I knew that it was a horrible thing. I wondered what is going to come out of it. I am not one for getting really upset about things like that. What is going to happen is going to happen. I try to live with it.

I asked her if she realized how serious it was at the time, to which she responded, "Not at the time, but by the next day of course everyone was pretty well aware of what was happening."

Even with uncertainty during the cleanup period, many commercial fishermen remained hopeful about the long-term status of the fisheries. For some I interviewed, this optimism extended into the next season and even into 1991:

I think the worst part ... was I didn't know how long the effects of the spill would be on our fisheries. In my mind I was thinking that we've got a cycle of fish that is out there in the Pacific Ocean some place and whether this is oiled or not, they are going to come back again next year.... This cleanup is not going to last forever, so I'm going to go fishing next year and ... maybe it's not going to be as bad as everyone thinks it will be.

I don't remember ... being that concerned because at that point I still felt like [things would be okay].... I knew all this oil had been out there and I knew a certain number of birds had died and sea otters had died.... But all these scientists were saying that everything was okay, that the stuff died but everything was fine. For the first couple of years ... I basically believed them. I was still was in this kind of optimistic thing that, 'Okay this spill happened and it is a drag, and it messed the beaches up, and there is oil sitting in some of these beaches. But it is gone now, and everything

is going to recover and be okay.’ So I don’t remember being particularly [upset] even at that point ... about things. Then the pink salmon started having problems in ... the season of ’91. Then I was just thankful that I didn’t have a salmon permit.... It was kind of, for me, this growing thing. As things seemed to be compounding over time, that got me more upset.

Very few individuals I interviewed recalled much, if any, concern about potential social impacts of the oil spill. One man in his early 20s at the time of the spill had this to say:

Actually I did not [understand the potential impacts]. I did not. I just thought ... at first I thought, ‘Oh my God. Well good, at least it didn’t hit Cordova.’ I thought, ‘It didn’t hit Cordova.... Thank God for that.’ Well it did.... [It hit] everything around us.

Others also recalled initially being relatively unconcerned regarding long-term impacts on Cordova:

I didn’t really think about ... how it would affect everything else later. You knew it was going to affect everybody but you didn’t think long term or anything then. You just went, ‘Okay, they will clean it up and everything will be fine.’ But obviously it didn’t happen and it still hasn’t happened.

One woman, an Alaska Native living outside at the time but who returned to Cordova almost immediately recalled quickly recognizing the importance of getting into some sort of routine after the spill:

[I knew we needed] to get control so that we could systematically approach everything. Because [of my experiences] ... I knew you had to slip into some pattern so that you could handle the emergency. Your adrenaline just can’t keep running ... the way it was running.

Even with this knowledge, there was little she could do to “get control.” As she noted, “Even at day 14 or 15 [after the spill] ... they were just scurrying around here, everyone. Just running around.” On a somewhat different vein, another individual articulated what she remembered as her concerns in the first month following the EVOS:

I was concerned about the people of Cordova.... I could see that most all of the families who were ... spending that time around the TV and not getting out ... [It was] just like the September 11<sup>th</sup> thing.... I became very concerned for the people of Cordova. Having the attorneys here practically from day three on [was challenging].... Some of them came with only the clothes on their back because they thought there were going to be here for less than 24 hours. They thought they were just going to be a quick in here quick out of here. Then they stayed, and they stayed, and they stayed. Their presence kept that thing just boiling all the time. It was a very scary place to be in because nobody seemed to have any [answers]. This was their whole livelihood they saw going completely down the tube. There was nothing in place ... at that time, to help with healing. It was just one bit of bad news after another and dealing with the attorneys and ... the paperwork and everything just kept it an open wound for a long, long time.... That is why the Cordova Family Resource Center even was birthed was because of the concern for the emotional stress levels in the community.

As time passed, people began to more fully comprehend potential social impacts on the community and the long-term nature of what was happening. A former commercial fisherman broached issues of a corrosive community emerging in Cordova as being of concern to her early on:

One of the things that upset me the most was the lies that we were told by Exxon, then the division it caused in the community, the way that Exxon set us up against each other, boats making more or different things, the attorneys.

Additional narratives revealing characteristics of a corrosive community developing in Cordova are presented in subsequent sections of this chapter, as well as in Chapter VI.

The impacts of the EVOS on the environment, PWS fisheries, and the community of Cordova were particularly difficult, given the close relationship between the population of Cordova and the natural environment. Because the community is an RRC, trauma, stress, and uncertainty associated with ecological degradation in the aftermath of

this technological disaster affected social cohesion and social structure as well as social capital in the town.

### 5.5.3 “We’ve Got to do Something:” Immediate Actions Following the Spill

People I interviewed who were outside Cordova at the time of the spill recalled feeling extreme frustration as they watched or heard EVOS media coverage. Typically, first reactions were to call someone in Cordova though these attempts were often futile as reported by this woman:

I immediately got on the phone and I am trying to call somebody.... I can't get a hold of anybody. Nobody is home or the phones are busy.... So finally, finally the next day I think it was, I finally got a hold of somebody.... 'What in the hell is going on?' She goes, 'I don't have time to talk. We have got to get out there and try to get them to ... contain the oil.' But they wouldn't listen to the fishermen. And then ... things just became so scattered. People were so busy just trying to do something, trying to help ... that it really disrupted [everything].... I couldn't get a hold of anybody. I just couldn't get a hold of anybody because everybody was out trying to do something. When they were over there with their boats and they wouldn't let the fishermen over, they wouldn't let anybody get close.... I was just so frustrated. I was just going nuts. I was just going nuts. It was just like I was just glued to the TV then too.... And I was doing a lot of praying.

Some individuals I interviewed had family commitments that kept them from immediately returning to Cordova. One woman's story was especially moving, revealing emotions she thought were long passed.<sup>9</sup>

[Another fisherman and I] got together the next day and tried to figure out what to do. We knew that CDFU had offered up boats and everything and he could see nothing was happening. He either flew up Easter Sunday or Monday, and I was wanting to but (*pause*) had a quite a bit of resistance from my family. I tried to do things from [down south] and had people

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<sup>9</sup> I saw this individual the day after her interview and she told me how “therapeutic” the process of talking about her experiences with the spill had been for her.

calling me from up here requesting that I do things down there. When there was no more boom in the world to be found and they needed some to protect Main Bay, I got on the phone and was able to find some. In talking to the people.... (*begins to cry*) gosh this is such a pisser (*crying*).

I asked if she wanted to stop the interview, but she declined and went on:

Just to hear on the news that they are using all available equipment, and then for me, 'el peon' ... citizen to be able to call and find manufactures that were standing by waiting to work over time and work double shifts, but hadn't received any requests. The level of frustration and anger [kept growing in me].... I did that as much as I could and kept getting ... requests [and] feedback [about the cleanup]. [I am] trying to think if it was a week or [what]. Anyway I just said, 'I can't handle it. I have got to go up.' Within a week ... I was just at the end of it. I couldn't handle [being away] anymore. I had to come up. The helplessness that you feel down there, and the news that you get from up here... 'No, they still [haven't done much] ... or 'Well yeah they picked up a little and they did this or that.' It just drove me crazy, so I came up.

When I probed about resistance from her family, she explained:

It was more my husband didn't want to [be left with the kids]... They were ... young children and he has burdened himself to be a single parent and jockey, working full time and [taking care of] a family with an absent wife for spring, summer, and part of fall. [For me] to encroach on his time earlier in the spring he found distasteful. It was a personal thing where he didn't want anymore of my life going to Cordova.... While I was gone [my son] lost his first tooth, so I missed that. There was a lot of things going.... And I remember my mother saying, 'Because of your family don't you think you need to (*pause*) look at your priorities, and don't you think your family needs you more?' (*crying*) And me seeing it as 'This is my children's life.... This is what I had planned for them.' This is me seeing the kids in Cordova growing up here and the fabulous experiences they had, and teenagers that usually disappear from the family [instead] spending weeks with their parents out fishing. This is what I wanted. This is my future. This is my family's future, and if I leave it to somebody else I see what's going on.... What kind of future is my family going to have? If somebody [else] was doing it I could back off, but ... I know what they're not doing and I know what it's threatening.... It's threatening my whole future ... and the future that I felt like I had given up some time with my children in early life [for].



For those in Cordova, as well as those who returned, the CDFU offices were a logical and common gathering place, information clearing house, and forum for organization. The associations and familiar networks of fishermen in the Union Hall were looked to as a source of strength as well as for answers to numerous questions that arose in the hours, days, and weeks following the spill. A number of my interviewees indicated they went to or called CDFU the day of the spill or soon thereafter. A commercial fisherman described what she and her husband did:

We were already scheduled to come back [to Cordova].... We had been in town less than three hours and [my husband] went into the Union Hall because I was very, very upset. I don't talk too much when I get upset. I was pretty clear on how much devastation I thought this was going to cause. Anyway, he wanted to do what he could to help. Within three hours of our getting off the ferry, we were taking groceries from the back of the car and throwing them at the boat, and he took two of my kids and they went out ... Nobody was doing anything. CDFU was the only organization that got on the phone and got equipment. Anyway, they got some boom, and [my husband] helped boom for the first week.

Several others remembered going to the CDFU offices as well.

I went down to the Union Hall where people had gathered ... and basically everybody was in kind of an uproar as to what was going on. We started getting reports back from flights that had gone out there and observed what had happened and ... on that basis you were able to put into your mind what was happening.

I know my brother and me went up to CDFU to find out what was going on and by then there had been airplanes out looking at how big it was and it was huge. And there was people saying 'Hey, let's get in an airplane.' But then there was people saying, 'Well, they don't want anybody up in the airspace.' By that time things were starting to roll and the chaos and the emptiness that I felt and I know the whole town was feeling.... We went back to work but throughout the day we didn't get much done because of all the reports that were coming in and the reality of the fact of what was happening.

I learned how the oil spill had happened through CDFU. The organization, once the oil spill had occurred, alerted everybody that was in town that

could help out.... They let everybody here in Cordova know what was coming down because when *Exxon Valdez* smashed into the rock, they didn't make it out on the radio. The press kind of kept it under the hat there. I don't know exactly how the CDFU found out, but when they did find out they got a hold of as many people they possibly could to help out.

Although many Cordovans immediately felt compelled to go out and work on containing or cleaning up the oil, others recognized a need to stay in town and attend to other business.

I don't think I'm the type of person that would have had enough personal ... 'whatever' to [work on the cleanup]. I was running around town helping ... [various organizations including] ... the spill response office.... The Exxon contracts that were coming out that had the confidentiality or the zipper clause on people ... all these contracts that said they wouldn't make any claims against Exxon and just all these outrageous things. We were copying stuff and distributing stuff, and trying to warn people about certain things.... I was contributing in that way.... [I also] went ahead and got [my boat] ready for fishing just thinking, 'Well then my [spouse] won't be quite as upset with me coming up,' because I had my boat ready. I didn't have to take a week later to get it ready.

We set up an oil spill response office where people could go, where they could keep abreast of what was happening. My role as [a community leader] was scheduling all the meetings.... We had boom classes. We had safety classes, government meetings. We had many meetings that took place [at the library].... It was ... almost a zoo in a way, keeping track of everything because people were coming in and [asking], 'When is the next boom class?' or 'When is the next safety class?' And we had people that even called in from the Lower 48 wanting to know how things were up here. And then we had the VECO office, which they handled a lot of the safety classes, boom classes.

During this initial period some Cordovans contacted people outside Cordova – particularly politicians – that they believed somehow might be able to help with the situation:

I contacted our legislators, and I let them know how I felt about the devastation that took place, so that they would be aware that something happened and what affect this would have in our community ... [and on] other outlying communities.... I even wrote to the President of the United

States.... I wanted them to know the concern of my heart and how I felt, and what could we do as people working together with our legislators to help our communities through this devastation...? We are still feeling the effects of it today. It has not gone away.

One fisherman called the White House:

[A few days after the spill] I told [my wife] that I was going to call the White House.... And so I did. I called the White House.... Sometimes I think it was really stupid and sometimes, sometimes I think it was just meant to be. I called information and they gave me the number for the White House and I guess I thought I was going to talk to the President, right? ... I called and I got this black lady and she was a janitor and she goes in this southern accent, 'Sonny, I've been here 20 years and I've never even seen the President let alone talked to him.' I told her, 'Well, I'm calling from Alaska and we just had this big oil spill.' She goes, 'I got this friend.... She's a really good lady and you should call her tomorrow. But you know what? It's 4:00 in the morning down here.' I was [thinking], 'Man, this is really stupid.' Anyway, I got up really early the next morning and I called that number and do you believe this ... [Because of this] I know that there is some really, really good people that care about people out there.... I got this gal in the White House and ... I should've wrote all these people who meant a lot to me during the oil spill.... I cried on the phone and I could get choked up a little bit [talking to you about this].... I told her what was going on and I told her that I didn't think that the President was ... taking it very seriously. I [said] ... 'This is all I've ever known was fishing.... What's going to happen if I don't ever get a fish again? There's oil everywhere.... There's nobody here. Where's the relief? Where's the money?' I was freaking out and she calmed me down and she goes ... 'First of all there is people here who care about you and there is people who know what's going on there. We do care about you and we want you to know that.' She called my house every single day for two weeks, to check on me and my family, just to see how we were doing.... There was nothing [else] that she could do for me but she did that. She called every day.... My wife was on a first name basis with her, but she went out of her way to be nice ... to make me feel like someone cared.... 'Cause she knew, just like you knew [how hard it was].... But that was pretty cool. That lady in the White House was pretty awesome.... That was one of the highlights of the oil spill.... She made me feel better every day anyway.

Another individual recounted how she decided, with the help of her mother, that it would be best for her to temporarily remove herself and her children from the chaos in Cordova:

It was very hard.... At that time my mother was supposed to be coming up and ... everything in me said, 'Don't come. Don't bother coming. Everything is so chaotic here and people are in dire straits emotionally. It would be better for you not to come.' But she read between the lines [and knew] that I needed out of here, even though I didn't know that I needed out of here. She did come and rescued me and the kids. We went up into the interior [of Alaska] ... and spent some time hiking and camping and going up to [the city]. We were just gone for two weeks so it was very nice to have that little break.

As reported here, immediate actions of Cordovans were primarily efforts to do “something” – anything to feel productive and to protect their environment and livelihoods. The helplessness they felt and their inability to be effective once they were out on the water contributed to their frustration and anger and, ultimately, to their beliefs that Exxon and Alyeska, as well as the state and federal governments, were recreant in the EVOS incident. Frustration increased as people who began to work on cleanup and containment efforts, saw devastation across the Sound.

#### 5.5.4 “Like Trying to Clean Out a Swimming Pool With a Q-Tip:” EVOS

##### Cleanup Efforts

The magnitude of the oil spill and Alyeska's lack of preparedness resulted in tremendous confusion in Cordova and elsewhere. To some, this confusion seemed almost intentionally generated by Exxon; others simply saw it as “corporate paralysis” and incompetence. Many perceived cleanup efforts as an exercise in futility: “It occurred to me [as we were flying over the spill] that ... Easter Sunday, it was spreading so quickly,

and that cleanup effort seemed so futile that it looked like trying to clean out a swimming pool with a Q-tip. It was just so silly.” Despite this feeling, according to one commercial fisherman with whom I spoke, initially the fleet had a

‘Can do’ attitude. There has been a spill. We have offered up our boat. They called and offered them again. I think maybe the mentality [at first was like] the earthquake, and in times of disaster you do what you have to do and you worry about [other things] later. You just do what you have to.... [And] when [CDFU representatives] flew out that morning and saw what was going on and realized how big it was and how incompetent the reaction to the disaster was, they got a loan from the city, an emergency loan for a couple hundred thousand [dollars]... [They] bought boom and went out to ... protect the hatchery. There are stories about them ordering more boom.... We kept hearing about ocean boom and they didn’t have any ... and finally [someone] found some and by now the guys had spent the \$200,000 and didn’t have the money, the check would bounce. [The] attitude was, ‘We will cover that later. Forget it.’ They ordered it and it was supposed to arrive and it didn’t come and didn’t come. They found out that Exxon had cancelled their order, and it was because they were going to ship it to us. And then there was some more.... The CEO of PWSAC ended up going to Houston or somewhere and talking to guys and telling him what he needed. They ordered boom, and it was going to go across the bay and have longer surfs protected. And [we] got half of it and then found out that the other half had been commandeered by the Coast Guard for another area that was unprotected and there was all this scrambling and grabbing other people and equipment. This was before the first week was up, so it wasn’t focused at all.... But, they were pretty quick to react and pretty quick to go without any promises [of money].

Other accounts supported these observations:

We were kind of stunned. We got our stuff together and I said, ‘We’ve got to go there.’ I called my friend [and he said], ‘You gotta get your ass up here. We got to go and see if we can get some of this oil and pick it up. We’ve got to do something....’ We drove all the way up straight in about 48 hours. I think we stopped once to sleep for about three hours and we drove all the way up and got the ferry and came over. And it was dark when we got the ferry ... [and] they didn’t go by the spill.... I went up [to CDFU] and said ‘We want to go out and work on the spill....’ [They said] we couldn’t do that and then [my friend] just said, ‘Fuck it. Let’s just go do it....’ He said, ‘We got 500 kelp buckets, let’s just throw them on the boat and let’s go out and pick it up ourselves if they don’t want to hire.... [My buddy said], ‘We got to go out and do something.... Who cares if we

get paid? It's our own back yard here, we got to go out and clean it up.' Of course, we had no concept of what [that meant].... At this point we were up to I don't know how many million [gallons]. Everyday it rose until it finally got up to 11 million – which I think was about half of what they spilled.

The herring fishermen who used small planes, spotter pilots, to locate the fish were all here in town waiting for the herring season. The spotters were here in town and ... they really didn't pay much attention or pay any attention to the no fly [zone]. They flew over it to survey what was going on and as soon as they'd come back I took some maps ... over to CDFU ... which kind of became the central location for information initially here in Cordova. And as the spotter pilots would come back, I'd interview them right there on the spot with the map and see the extent of the oil, and the extent of the cleanup. And what we got in report from these spotter pilots was considerably different from what we were getting in reports from Alyeska and therefore the media. Where they might say that a certain amount of equipment was deployed, that doesn't necessarily mean that it is in use or even on the site, or even effective. It could only mean that it is getting there. We found that there was a lot of that kind of activity and information being passed around.

It was apparent that a lot of the cleanup stuff that was going on wasn't of any use at all and it was poorly organized. We were kind of laughing about the way it was done.

#### 5.5.5 “The Bifurcation of the Fleet and the Community Had Already Begun.” The EVOS and the Emergence of a Corrosive Community in Cordova<sup>10</sup>

According to numerous accounts, characteristics of a corrosive community began to emerge soon after the spill. Most issues associated with this phenomenon were articulated in terms of “working on the spill” or “not working on the spill,” particularly with respect to financial implications of this. Narratives revealed different perspectives of the emerging corrosion:

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<sup>10</sup> Cordova as a corrosive community is addressed with respect to social capital in more detail in Chapter VI of this dissertation.

The first thing we did was call CDFU immediately. ‘What can we do?’... The bifurcation of the fleet and the community had already begun.... [In just] a couple days there was already some jockeying going on in town here and the local boys wanted to keep these spill contracts, of which I was unaware. I wasn’t sniffing after money. [I just wanted to know], ‘What can I do? Can I get up here and throw my boat in the water? What’s going on?’ [Their response was] ‘You can send money....’ I did send some money to CDFU to help panel the phone banks.... By the time I got up here in late April I realized what was going on. I realized I had already been ‘had’ a little bit. They didn’t want the whole fleet up here immediately so there wouldn’t be the whole fleet to choose from in awarding the spill response contracts. They wanted to sew that little deal up for themselves, and it’s taken me many years to get over that because ... that wasn’t what I was about.... I did come up and put in for spill response. At first I came up and said, ‘Screw them. I’m not going to do it. I’m here to fish. I’m not going to whore after their money....’ [But] it became apparent that the contracts being awarded [were really good]... I had a family and obligations and uncertainty about what the next year, and the next year, and the next year were going to bring. So [I thought], ‘If I can make a packet here and maybe that’s all I’ll ever get, I better do it.’ And so, I fished.... I kept my [contract application] paperwork alive [and] fished. [I] did okay fishing. Then I think [in mid-July] that year, for not big bucks [I got a contract]. It was \$1,200 a day. I did make about 70 grand off the spill, which I would love to do that every year.

This fisherman’s friend interjected, “But, you would rather do it fishing.” He quickly agreed, “I’d rather do it fishing. And that was nothing [compared with] the people that got on early for the big bucks and knocked down from 300,000 to a million bucks.... the spillionaires, that whole term.”<sup>11,12</sup>

Another seasonal resident had similar perceptions:

People were trying to get jobs. Then there was a tremendous amount of animosity because some people had jobs and some people didn’t have jobs working on the spill. Some people were making a lot of money and there was an incredible amount of nepotism going on ... in town about who was who and who [was in] charge. [It was] not a normal sorting out thing. There’s all that ‘normal’ sorting out thing in fishing; it basically revolved

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<sup>11</sup> This exchange took place during one of two sessions where I interviewed two people at the same time.

<sup>12</sup> Also see Endter-Wada et al. (1993) for comments regarding “spillionaires” and referring to those who worked on the cleanup for “blood money” as “Exxon whores.”

around your results. The top guys are the top guys. But there was no top guys in the oil spill response. There was a difference. People that didn't have power before had power [all of a sudden]. The person who was in CDFU had power on who got to go out.

These narratives suggested social disruption characteristic in a corrosive community (Freudenburg 1997), including anger, confusion, and conflict accompanying uncertainty in the aftermath of the EVOS.

One individual volunteering at CDFU commented on a tension-revealing incident she recalled at the Union Hall offices:

I was in the reception area talking to fishermen and getting information about what was going on.... I remember one time ... this one fisherman, I don't know who he was, he was probably about 6'5" and came and he was going to try and bully to get in. I stood up to him and said, 'No you are not.' We had a hollering match.

As I asked interviewees about the atmosphere in Cordova after the EVOS, many narratives revealed undertones of a corrosive community. Again, fear, anger, and apprehension associated with conflict, stress, and uncertainty were expressed by interviewees.

[People] were pretty touchy. You had to be really careful. A lot of people got together and helped people out, but you had to be really careful whose side you were on. There was a lot of hard feelings and misunderstandings due to the spill. There was a lot of hardship because there were some people that did well and Exxon paid them well. Then there were some people that didn't get paid at all – they didn't get anything out of it. A lot of people say, 'That it's their fault. If they would have went and asked, they probably could have done better.'

Some people made quite a bit of money working on the oil spill. Some people didn't make any; some people lost. Some people worked because they actually wanted to do something. Some people worked just because they wanted to make money and didn't work much at all.

The guys who were under contract working for Exxon with their boats on the spill basically are Exxon at that point. That is where they are getting



paid from, so that is who they are. A lot of these guys that are around here say they hate Exxon or whatever they worked for Exxon when they were cleaning up the spill. Technically, where is the money coming from? It is coming from Exxon. They all became Exxon employees as soon as the spill happened.

Some people weren't bothered at all. it was just a great opportunity to anybody with dollar signs in their eyes and a thumb at the end of their hand were trekking to Valdez to make the big bucks, toasting Joe Hazelwood in the bar. There are a lot of different ways that people looked at it.

Incomes have been lost. Incomes have been made. Now you've got the 'haves' and the 'have nots' fighting against each other, the fisherman that didn't go because ... they didn't want to [work for] Exxon and VECO's money against the fisherman that did go that made beaucoup bucks. Then there were the fishermen that went because they wanted to clean it up no matter what. But, they also made big bucks. Knowing there were the guys that managed to get together four or five skiffs to have people out working those skiffs getting the big bucks.... Then you had some of the people who were at home who made nothing.

As this woman described it, financial issues associated with the spill generated considerable tension among Cordovans which led to conflict and stress:

[People were] traumatized, totally traumatized. There wasn't anybody that hadn't had a major upheaval in their planet. I was offered jobs by a friend who was doing oil cleanup for VECO and I could have taken that, but I didn't want to go there.... I was probably pretty angry with Exxon and I didn't want to do oil. I wanted to do something else that I thought would make a difference and so for me personally [that wasn't an option].... As far as everybody else ... you have these situations where you had the seine people that didn't seine that summer that had boat payments to make and no money to make them because they also personally objected to the method of cleanup and the manner in which the politics were being handled.... Some people felt that like was giving in to the enemy, taking ... blood money, so to speak. They didn't feel that they could do that and they were the ones that lost. There were others ... [who] felt, 'It's Exxon paying us but it's still doing the job that needs to be done.... We need to do whatever we can to fix the Sound, but we are going to make a good contract while we are doing it.'

Additional comments like the one below provided further evidence of characteristics of a corrosive community:

There were some fishermen [who later] ... told me, 'I went to Exxon and told them if they paid me to be their consultant on the fishing issues I would be their consultant.' [They were] actually pimping. Those folks have always had that personality [that] you can't trust them no matter what.... They are really not looking out for the common good.... We just know who they are. A lot of them have left town because they don't find any support in town. We haven't driven them out. They just didn't do well. They probably can't live with what they offered, and Exxon did not take them up on that.

As discussed in Chapter VI of this dissertation, corrosion and social disruption arising during EVOS cleanup efforts have dissipated somewhat since the immediate years following the spill, but they lie just below the surface and are – according to those I interviewed – likely to emerge once again should punitive damages finally be paid by ExxonMobil.

#### 5.5.6 “They’re Lying Through Their Teeth:” The EVOS and Recreancy

Other fishermen I interviewed provided narratives not merely suggesting incompetence, but deception on the part of authorities, particularly Exxon. The following accounts suggested Coast Guard involvement in the process.

About 11:00 [on March 24<sup>th</sup>] we flew out to take a look and sure as shit, there it was – sitting on the reef. And they had another tanker that was there offloading [oil], pumping out ... water right into the ocean and leaving a nasty oil spill of its own.... They said they spilled 11 million gallons.... They gave us the spill rates that were coming out of there per hour and I figured it had to be about twice what they actually admitted they spilled, just by the spill rates they were giving us. How else would they figure it? [Exxon's figures] never did add up.... On top of that ... after they got the boat ... off the reef, they towed it over to the islands, a little group of islands in the middle of the Sound, and they put it in the bay on the back side of this group of islands.... They had the Coast Guard in

collusion with the oil company so they had a no fly [zone] and nobody could go near that [part of the] Sound.... Nobody knew what they were doing in there.... [It's] just the same kind of shit that our Federal government's always doing. They're in bed with big, big money, big companies. We were getting fresh oil 'cause I was on the downwind end of [it] 40 miles away. We got fresh oil spills well after the original oil spill. They pumped considerably more oil over the side so that they could repair their tanker. Instead of putting it in a bay on the upwind side, where they could have at least contained the oil, they put it in a bay on the downwind side of the island, which is really stupid.

All of a sudden, that side of the Sound got oiled, after that tanker got moved out there.... It never adds up – the amount of oil that they say that was lost, to what that tanker could hold, to what they put on another tanker. There's a lot of missing barrels of oil, now where did they go? And if they say they're all accounted for, they're lying through their teeth. 'Cause they just went out there and I'll bet you anything they just pumped it right over the side. And [the] Coast Guard's involved, so they helped out.

The previous two narratives suggested considerable lack of “abstract” or “formal” trust as articulated in social capital literature. Authorities and organizations responsible for coordinating and directing spill containment and cleanup activities were deemed either incompetent or deceptive which, when considering social capital, translates into lack of “formal” trust. Moreover, this idea is embodied in the concept of recreancy. The narratives also address issues of trust at a local level, “informal” social capital among fellow Cordovans. Loss of formal and informal trust represent a loss of one of the primary components of social capital. It may be said, then, that recreancy diminishes social capital. Recreancy also decreases ontological security, which is arguably a prerequisite for social capital.

## **5.6 “It Was Chaos:” Narratives of Community Atmosphere in Cordova Following the EVOS**

As expected, narratives of those I interviewed regarding the atmosphere in Cordova in the days, weeks, and months following EVOS differed according to various perspectives and social constructions of circumstances. Moreover, during the period between March 24, 1898 and September 15, 1989, these interpretations evolved and have continued to evolve.<sup>13</sup> The specific question I posed to interviewees was “Do you recall the atmosphere in Cordova in the immediate aftermath of the spill?” As with other questions, this inquiry elicited a variety of responses. However, several themes emerged; these are discussed in the following sections.

### 5.6.1 “The Sky is Falling; The Sky is Falling:” Chaos in Cordova Following the EVOS

Among many words used to describe the community were devastated, shocked, stunned, numb, disbelief, angry, frustrated, grief stricken, chaos, frenzy, mayhem, and panic. Especially in the first few days and weeks after the tanker ran aground, the social environment in Cordova was described as being in upheaval – even by Vietnam War veterans:

It was terrible. It was just awful. People didn't sleep. They didn't eat. They were dehydrated because they talked a lot, because they cried a lot. People were running around, trying to do things as fast as they could. I guess the definition of a disaster is you have this much stuff that needs done and this is all that you can do. And the rest of it is just basically pretty much lost.... It just happened. There was nothing that you could do about it. A lot of people had nothing that they could do.

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<sup>13</sup> Cleanup activities officially ended September 15, 1989.

“Chaos” was a commonly used term to describe the overall community atmosphere:

[It] became real obvious that the leaders, everyone in town was in chaos. Everyone [was] running around trying to do something, but they were like chickens with their heads cut off and the problem was ... all the natural leaders of the fleet had jumped on their boats and gone to the hatcheries. [It] ... became real obvious that the people [who were] the leaders had left town to go fight the war.... Those of us left in town were chickens with our heads cut off going, ‘The sky is falling; the sky is falling [and] nobody has got any umbrellas.’

It was chaos. It truly was chaos. People were scurrying everywhere to get away from a broom. Nobody was sitting still.... There was no organization. It was just scurry, scurry, scurry. Everyone was moving somewhere with a target, but the target was everywhere. They were crossing paths to get there. It was real crazy. I think of it now, and I don’t know how anyone survived ... just [because of] the disorganization. I would ask questions and nobody had an answer.

As I listened to these comments, my own mental image of the oil slick floating and moving slowly but surely with the currents, tides, and winds was juxtaposed with these recollections of frantic social disruption.

It was a frenzy.... The fishermen came, heard about the oil spill, [and] they responded. They got all of their supplies, and oil, and everything else for fuel on their own credit. This was their Sound. It was being impacted. They needed to be out there. They went out there not knowing what they were going to need, how they were going to get supplied with anything .... There was no emergency system set up. They just blindly went out there and banked on a lot of faith that the town would keep them going.... Exxon started letting contracts ... [after about] 10 days ... and VECO took over from Exxon after that.

People didn’t have time to stop and talk because they were ... trying to get out there to help do something at that time. They were just starting to let contracts for boats and looking for crew.... When a crewmember would get a call ... they didn’t have time to say, ‘Well let me think about this.’ No. They had to [go right away].... They were a warm body. They were willing to go. [They were told], ‘We are going in an hour.’ They had enough time to go home and grab clothes.

A Cordova businesswoman in her mid-40s compared the panic she observed to what she imagined being in an earthquake would be like:

It seemed to me like everybody was in a panic. There was a lot of people that were running around and trying to do things [who] weren't exactly sure what to do or how to go about it. It seemed like there were a lot of people that were running around in a panic. I guess it would be like an earthquake – people running around trying to go somewhere but where would you go to get away from it? That's pretty much my best way I could describe it.

In contrast, a couple of individuals I interviewed did not recall Cordova being in much turmoil at all:

Cordova was not near as bad as Valdez.... I'd go there to work on boats and it was just packed with people, just solid people. It reminded me of ... old western movies about all the crazy people ... the drunks and everything in an old mining town ... an old west. Crowds of people in the streets just moving continually.... [T]hat is exactly how Valdez was. You felt as if you had just stepped right in the middle of an old western movie. It was crazy and it stayed that way all year.... I couldn't believe it. At night ... at like 2:00 in the mornings, streets were still packed with people drinking and running around. It was just unbelievable. [Compared to Valdez, Cordova] ... wasn't crazy. I was here most of the summer. I spent one week [outside].

I don't really remember. I don't think that it was all that busy because it was only March. There might have been some people in town ... to get ready to go herring fishing but ... I think that it was mostly the people that live here [who] were here. I don't think it was that busy.

However, by most accounts, there was a general mood of chaos and panic in Cordova, accompanied by feelings of shock and disbelief; people were stunned at the news of the spill and the unfolding events in the Sound.

The whole town was stunned.... Everyone was walking around with this kind of pale look, like, 'Oh my God.' There were already people mobilizing. There were fishermen who were going out to actually check out the scene and find out what was going on.

[We were all] pretty much in shock, kind of numb, 'cause you didn't really know. Nothing like this had ever happened before.... There was ... [not], anything to fall back on to say, 'Well this happened to this community or this happened somewhere else; we can relate to this.' We didn't know anything about this. We were just kind of winging it. 'What's going to happen? What's the future going to bring? Is it going to wipe it out?' ... No one really knew.

Chaos, confusion, uncertainty, and feeling helpless or overwhelmed by circumstances generated by the EVOS went hand in hand.

Folks wanted to help. They wanted to help and they wanted to clean it up and [soon] ... a lot of them thought that maybe you couldn't clean it up.... We realized as things progressed that you can't clean it up. It's almost impossible. You can clean it up a little bit, but it just so overwhelming. People wondered ... if our whole livelihood was just going to be down the drain. They wondered if ... we couldn't eat anything, just cut the subsistence down.... Is our food supply poisoned now?... It wasn't good.... It was just a very, very fucking depressing situation.

[We were] just whopped, emotionally whopped, physically whopped; it was terrible.... There's only so long you can go without sleep, food, and water, and then you finally realize, 'Okay, all our frantic effort ain't gonna make this go away. We've got to settle down here and take a deep breath and pace ourselves....' We realized that there's a whole bunch of shit we can't do.

#### 5.6.2 “Communications Was Just a Total Break Down:” Poor Communication in

##### Cordova in the Wake of the EVOS

Poor communication and lack of timely information exacerbated emotional and physical fatigue, as these narratives relate:

God ... For the first 24 hours, my phone rang constantly.... I could call Valdez but what I usually got was a busy signal. All the radio channels were busy all the time. Communications was just a total break down, both in town and on Prince William Sound. People with stronger radios were walking over conversations with other people. It was just a mess. It was awful.

The hard thing was nobody understood what was going on. We weren't allowed to fly.... All the air charters were bought out so you couldn't fly. The air space was closed.... Pilots were restricted at \$5,000 a day for their charters to not say anything to anybody. [We wondered], 'Who is out there watching? Who is telling us?' We just knew that it was desperate because more contracts are being let. Someone would occasionally say something on the side or ... maybe an occasional news media person was able to go out there and tell us what was going on. Then it became required that Exxon tell us what is going on.

There were lots of strangers [in town].... Nobody had any answers.... I didn't see any attorneys at that time, but whatever attorneys were in town, whatever newsmen were in town, everyone was disoriented.

[It was] very tense, very tense.... Not knowing ... what was happening [was difficult] ... especially sitting on the sidelines over here, not being able to see what's happening over there because I couldn't afford to fly over there. Every flight [or boat] that was going [was filled] with people who needed to be there.... You had to be on business in order to even get on a plane about that time.

Community leaders immediately recognized a need to obtain and release accurate information; they quickly realized they could not rely on Exxon, Alyeska, state or federal government officials, or the media. This proved challenging, as the following account suggests:

On the daily news updates briefing or press releases ... there was a rep from Exxon, one from CDFU, one from the city and possibly somebody from the state everyday giving out briefings to the press. We had ... members of the press there of different persuasions. [There were] magazine people, radio people and so on. [There were] 45 ... 60 people there sometimes at a time ... listening in the audience. It was very interesting. Very interesting to catch Exxon in lies, very interesting. Exxon at the time was saying [for example], 'We have ... 26 skimmers out in Prince William Sound.' And it dawned on me, 'What are you doing with the oil that you are collecting? Where do you deposit it?' They indeed have 26 skimmers but they weren't doing anything. It was there but they weren't effective. And I raised the question, 'What are you doing with the oil? Where are you putting it?' And he said, 'We will cross that bridge when we come to it.' It was a sham. We were representative [of the] fishermen's viewpoint in each press briefing, news briefs to set the record straight that Exxon did not have it under control. This was a sham, at least



... at certain points of the response.... It was chaos. Just imagine you were in their shoes trying to save face.... It was just a nightmare.

When I asked where CDFU was getting its information, he replied: “We had friends who were pilots who were involved in ferrying individuals and state personnel [out there], so we would have ways of getting information.”

Efforts to alleviate communication concerns resulted in a number of meetings intended to share whatever information was available. Interviewees described various meetings that took place in the days and weeks after EVOS.

I just remember ... city council having executive meetings, board meetings, council meetings ... every single day, or every other day. There was different things happening all the time.

When I came in ... they had actually been having the city meetings for people to go down to the high school and they would get reports of what was going on. Exxon had started to show up.... At the same time, people were going out to do whatever they could do.... There wasn't a lot of organization on the part of Exxon or Alyeska [three weeks after the spill]. The people of the town were still trying to figure out what they could do to alleviate some of the problems that they were having out there.... Then there was an anxiety of what was going to be done. Exxon was saying that, ‘You were lucky it was us that did it because we are going to take care of everybody.’ Then the next thing you know there is a Senate Select Committee [involved, and they and Exxon], they're playing this little game with each other. They are just kind of laughing with each other too. It was ... really ugly.

[There was] so much anger and sadness [at that meeting].... That is the only way to describe it: anger and sadness. I remember this guy and his wife standing up and reciting the ... Declaration of Independence and how emotional that was. A good friend of mine ... this giant of a guy, but a gentle giant, getting up and just screaming at Don Cornett, how he never believed a word he said. ‘Look what you have done to us....’ He has had a lot of trauma in his life, but the gentle giant getting up in front of that crowd and just [roaring] at this guy.... I have never seen [him] so angry.... Don Cornett was so sincere and very apologetic. I think he was fired from that job just shortly after that.... I really believe that he felt our pain and anger.

[There was a ] congressional ... sub committee meeting that was held here.... We let people know where we [the fishermen] were coming from. [In one of the meetings the] ... chair of this committee said, 'You know it's surprising in this town how many of you people are very articulate' (*laughing*). So [one of our people] said, 'Mr. [Congressman], I want to thank you for your kind remarks. We likewise are very surprised at how articulate you congressmen are' (*laughing*). What the hell did [he] think we were? Dunces?

Although on one hand the various meetings could be viewed as an opportunity for interaction, there was so much anger and frustration that social capital was not fostered in these settings. Because there was no collective definition of the situation, there was little consensus on what should and could be done. Without such consensus, even the strongest of ties and social capital would likely have been ineffective.

The wife of a commercial fisherman indicated her experiences with town meetings in Cordova during the aftermath of the spill has impacted her to this day:

There were meetings going on in town. I went to those. I don't do meetings anymore.... There was information coming in from everywhere. I distinctly [remember] ... the town just got bombarded with people. I remember waking up in the wee hours of the morning sometimes listening to the helicopters come over and thinking, 'My God, it is like a war zone or something ...' just the stress level of it and the noise and all the different [stories].... [You are] ... trying to figure out what was the truth between the media and what you are hearing from family and friends out there ... flying back and forth in from the spill, and the town meetings that went on. I went to most of the meetings. At this point they are kind of a blur. I went to meetings at the high school and went to ones at the Union Hall.... I am sorry but that is really kind of a blur.

Another Alaska Native woman made a conscious effort not to participate in EVOS-related organizations or meetings:

I never got involved with [any] ... of the citizen's groups, none of the environmental campaigns, nothing. I just flat couldn't handle it because I knew; I am not somebody that warms the chair. I'm going to say something and probably get way too involved. I knew I couldn't even put my nose in that.

These comments are something to consider during later discussion of how the EVOS affected social capital in the community, particularly with respect to organizing effective collective action requiring more than a short-term crisis response. If others in Cordova felt similarly, it may have influenced participation in non-EVOS related meetings, as well, thereby diminishing certain types of opportunities for networking, interaction, and association.

### 5.6.3 “People Were Really Outraged:” Frustration and Anger in Cordova in the Wake of the EVOS

Frustration was apparent as people recalled the situation in Cordova in the wake of the EVOS. A young woman who was in her late teens when the spill occurred articulated:

For the first couple of weeks after the spill, I remember it being very uptight. The atmosphere [was one] where the people are very frustrated because nothing was being done. They knew the weather was good. They knew that they better take advantage of it. They had gear that they were gonna volunteer to do something with their time just to get out there, start cleaning it up, and they were put on hold. [They were told], ‘Nope, can’t do it....’ That was almost as frustrating as anything because they knew what consequences they were gonna have in the future of losing fisheries, of losing so much. They [kept] getting their hands tied. It was almost heart breaking again ... realizing they’re not gonna let you do anything in your backyard to clean it up. It was really frustrating.

Often, what started as frustration subsequently was manifested as anger, outrage, and in some cases, outright hostility.

[There was] a lot of anger. People were really outraged. [During] this community meeting that we had at the high school people would’ve liked to have torn this guy apart. It just was a lot of anger, a lot of feelings of hostility toward Exxon and the fact that they had precipitated this event. I

don't think many people had ... an idea of the magnitude of the consequences but [they were angry].

[There was] a lot of hurt, anger because ... you see the people that make their money out in the sea for their living were wondering, 'This is how I made my money. This is how I supported my family. Now what am I going to do?' They invested a lot of money in their boats, their gear, their crew, everything that it takes to go out and make a living in the sea, and now they are looking at it as, 'Wait a minute, how am I going to make it?'

One woman, a former commercial fisherman who was working in town at the time remembered during our conversation:

R: Everybody was angry. Really angry. At the same time they were so busy jumping in there trying to prevent it spreading that they really didn't have time to vent their anger until three weeks later when they were done getting it contained.... There was a lot of anger in this town. A lot of disbelief.

I: Were there people ... talking about it?

R: Oh, big time (*whispers, crying*). It was bad. I hate thinking about it.

I: I'm sorry. Would you rather not talk about it?

R: No, it makes me feel angry.

Another fisherman recalled the mood in Cordova as, "Just tense. People were scared ... and ... angry ... and really frustrated that more wasn't being done.... [They were] really angry that the oil hadn't just been corralled up earlier." I asked a woman who was working in a local bar at the time of the spill whether people were angry, frustrated, or upset and how she would describe them.

All of the above. There would be fights sometimes in the bar between the VECO workers and the fishermen.... They were big fights. We would have to call the cops because people who were employed and the big wiggers would come in and the fishermen would get into it with them. It got to be scary sometimes.

An individual who was in high school at the time remembered there being “Really pissed off, upset fishermen. It was chaotic.... everyone was wondering what was going to happen to our future.” She went on:

We had a lot of discussions in high school about it.... There were some pretty heated up students about that.... They were pretty freaked out about it.... We didn’t know what our future was going to be like in 20 years, if we were going to be able to fish or if we were going to have a livelihood or what was going to happen to the town.

#### 5.6.4 “I Felt Like A Stranger In A Strange Land:” Loss of a Sense of Community in Cordova in the Aftermath of the EVOS

An Alaskan Native woman born and raised in Cordova provided this narrative articulating some important aspects of social capital affected in the immediate days, weeks, and months following the spill:

I felt like a stranger in a strange land. It was my hometown. I was born and raised here. I know everybody in this town. It was overrun with media; it was overrun with greedy people; it was overrun with extremists on both sides of the issue.... We were under siege, and I felt like not just Cordova but the whole Prince William Sound was kind of under martial law. It was weird. It was very, very strange, a chaos or anarchy kind of thing. There was no sense of community. The sense of community got ripped right out of this place. It was really, really sad. Nobody knew who to trust, who to care for. It was weird. We stuck to ourselves and we stayed on our boat. It was so weird.

Clearly, according to this statement, networks and associations were hindered in the wake of the spill; moreover, being unsure who to trust implies diminished ontological security and social capital. A fisherman simply stated, “It wasn’t the fishing community atmosphere [anymore].... It was a very confused atmosphere.”

An almost immediate influx of people from outside Cordova – reporters, politicians, attorneys, government officials, and Exxon representatives – intensified an already difficult situation for Cordova residents.

There were lots of people in town. I just remember a lot of – well, I won't say strangers – but they weren't Cordovans.... A lot of tempers [were] short.... It turned into a real little city and not really reaching out and being kind to other people, each to their own. That's what it was like.

The town of course was just mayhem. Shit, there was a lot of people here. I couldn't even begin to tell you how many people were in the community at the time. A lot.

It was totally different than when I had been here [a few] years before.... There were a lot more people here. People were in like a panic running around. There were lines everywhere for everything. You were actually waiting for stuff. You weren't able to walk up and do it like you can in the wintertime.... At the grocery store [there were] ... lines, shelves empty in spots. People were buying stuff up. Exxon bought out stuff like crazy.

A local businesswoman noted, "One of the most stand out things was just how crazy this place got that summer. It was totally crazy." Many Cordovans I interviewed recalled feeling unsafe in their community for the first time:

On top of [the spill], what was growing [was] sort of an increasing danger.... [It] was the first time that I ever felt not safe in Cordova ... but there were people who were actually frightening in town. By [then I was] very familiar with Cordova and [felt] safe here and seeing strangers is hard. It was a scary time.

One woman noted,

R: I grew up locking my doors in a town of 4,000, but here [with] 2,500 I don't.... We watch out for our neighbors really good, and you tell them you are going to be gone [and] they'll ... watch and make sure that everything's okay.

I: I would assume that was not the situation when all the outsiders were here?"

R: No.... [We locked our doors.] My husband was a hunter so we had lots of guns in our house.

These indications of Cordovans feeling unsafe in their community suggest an almost immediate decrease in social capital.

#### 5.6.5 “They Just Started Pouring Into Town:” The Arrival of Outsiders Following the EVOS

In many respects, Cordova simply did not have the necessary infrastructure to accommodate the numbers and needs of those who arrived to “help” in the aftermath of the oil spill.<sup>14</sup>

One of the attorneys [here in town] had just retired the week before and had sold his office furniture. He bought back his office furniture and set his office back up so that he could work on people’s paperwork. That was chaos. That was our only attorney that was in town. The other attorneys that came to visit, they were scrambling to find office space. They knew that they were going to have to have office space.... There was no process.... [People] couldn’t get any office space at all. Fax lines, telephone lines [were] almost impossible to get. To get any of this work done was impossible. Carpenters to divide rooms up into offices, places to stay, everything was at a premium. It wasn’t available. People weren’t holding out for ... who is the higher bidder. No. If you had a bed it was used. Some relative had come home to help or you were putting up your crewmembers. Skippers were calling in their crew from elsewhere, college students ... ‘Instead of coming up in July can you come up now? I got a boat I got to run.’ They just started pouring into town.

You can just imagine. Imagine in this room. I don’t know how many telephones we had going. People from all around the world [were here]. We had journalists coming in from Europe....We did have international journalists coming in to get the fishermen’s perspective. And then on top of this we had ... [created] the Prince William Sound Regional Citizen’s Advisory Council as well the council for Cook Inlet.... That was going on also at the time.

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<sup>14</sup> For additional quantitative data on these issues, see also Impact Assessment, Inc. (1998).

We also had the lookie-loos, the ones that said, ‘Well here is an opportunity to make some money.’ There were a bunch. Cordova was the easiest port to get a job if you weren’t a resident. There were ways in which you could do it. They did it.

This situation of outsiders coming to Cordova was aggravated as local residents began to leave town to go work on containment, cleanup, or wildlife rescue operations. A number of people I interviewed were gone for weeks or months at a time:

I came back and forth [but was essentially gone for just over three months]. We’d come in for a few days and somebody’d go ... get some more groceries and ... get the mail and pay some bills and have a little R and R and go back [out].

Within 48 hours we were gone.... We were working on [our gear] when it happened and we kept working on it because we didn’t know what was going to happen. After a couple of days basically it became clear they weren’t going to open the fisheries and we left.... I don’t think I was around town a whole lot. I really don’t remember. Everything I remember was what I heard of people talking about what had happened. All the town meetings and that stuff were after I was gone. I was gone for 70 days or something. By the time I came back the initial thing was over and then I went seining.

A woman who stayed in town said the atmosphere in Cordova was like “doomsday” once people heard about the spill. She continued:

Everybody left because they all got such good jobs. I opted to stay [in town] and work in the bars.... Everybody [left] ... because they were making such good money. There was no point in staying in town, but I didn’t feel like scrubbing [rocks].

There were many others who remained in town for a variety of reasons:

[Our daily routines were disrupted] entirely. Entirely. We had we had an exodus of people from town going out to work on the spill, and the effort was genuine and it was generous on the part on the guys that participated at the very beginning. They volunteered to go out and assist ... in defense of the hatcheries.... A number of us stayed here in town. We thought that it was important to hang on and keep CDFU together as a board so we can conduct business.... We stayed either here or a fraction of us went over to Valdez.



This “exodus” created a special set of issues for those left behind to deal with, as recounted in the following narratives:

There were a lot of issues here. [Where I worked, in a government position] ... we were not allowed to talk about it. It was like nothing had happened outside these walls. I had the hardest time with that. I am going, ‘No ... this whole community is devastated. We can’t just sit there and just pretend like it didn’t happen.’ [But] apparently we are supposed to [pretend that it didn’t], being good federal employees that we were. My patience for that became less and less.

I kept notes during that time. The initial impact was shock and disbelief, and then we just had to cope with the disaster the best we could. In my case [as a businessperson] ... all of my employees left to go pick up oil. It was the busiest time I have ever had and I didn’t have any help at all. [I decided], ‘Let’s just ride this pony,’ because it was extremely difficult to even [take care of business].... It sort of came in waves. The media [came first], next the scientists, then the thrill-seeking environmentalists.... I didn’t really have time to stop and analyze what I was doing. All I had time to do that summer was work.

The worst part of it was not being able to find anyone to employ. The restaurants suffered. The day care suffered. I remember having a car. I needed was somebody to change the U joint and I couldn’t get anybody to change it. It was parked where it had broken down on the hill. We had rolled it on down to what was then the Co-Op. Then it had to get out of the Co-Op, but there was no way to get it fixed because there was nobody working on cars in town [or boats, either]. I ended up having to give the car away to somebody that could fix it and get it out of there. You just could not find people to do work because they could make so much more money out there.

You needed to have the work force at home to keep the community going. Finding people for the drugstore, for the grocery store to work at minimum wage was [difficult].<sup>15</sup>

During the cleanup, families were thrust into challenging circumstances as this quote reveals:

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<sup>15</sup> For additional qualitative and quantitative data on these issues, also see Endter-Wada (1993) and Impact Assessment, Inc. (1998).

Many times ... they would pull the wife [in to work on cleanup]. This is a sexist situation normally, but they would pull the wife. They were desperate.... If she was lucky and had made arrangements for at least for a couple of weeks with her neighbor to watch the kids, they would do it depending on what the neighbor situation is. Fishermen are notoriously up early ... trying to get their crew together. Kids go off to school in the morning and by the time 10:00 comes [a husband] says, 'Honey you've got to go with me. I need another deck hand. Can you get your girlfriend to watch the kids?' So she would catch [her friend] and say, 'I got to go out and help.' It would be a negotiated deal, but [she] didn't have time to actually talk to the kids and explain what was going on. They just knew that ... they were going out and they didn't know when they were coming back. [Parents] were kind of going into a black hole.... 'I will be back when I can be back.' Everyone was so [disoriented].... It was an upsetting thing.

I was on several of the childcare boards at that point in time.... We were having to deal with community issues for childcare because all of a sudden we had children that had never been in childcare their entire life. Their parents had left and gone out to work on the oil spill, and they were being left with caretakers. They had never been left with another caregiver [before].... They interacted with kids, but never on a daily basis in an organized day care system.... We had ... made sure we had adequate daycare in town [for those of us who needed it prior to the spill] but some of these kids had never been in a ... daycare at all.... There was a community group that formed that used to meet at the hospital that summer to make sure that we were meeting the community needs for childcare for the kids while their parents were gone. Both mothers and fathers were gone often working with the oil spill.... We didn't have enough staff because everyone was out working for the oil spill for way big bucks and we needed people to come in and help us take care of these children that were left behind. But all we can pay them is minimum wage, and so it was a real inequity situation.... [We] would meet and try to discuss some of these social issues that were happening and how to offset the worst of it, the in town damage because we weren't the ones that went out and made the big bucks. I couldn't go. I was a single parent. I wanted to go, but ... I have no one I can leave [my child] with.... Some parents did do that, they left them with other family members that could take them to day care.... I had to work ... so I couldn't just leave.<sup>16</sup>

Cordova's canneries were another aspect of the town's infrastructure affected by cleanup activities in the wake of the spill.

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<sup>16</sup> For additional qualitative data on these issues, also see Endter-Wada (1993).

We were getting ready for herring. We had our ... cannery crews in place. The 24<sup>th</sup> of March the oil spill happens. [Of] course they stop herring.... The canneries don't know what they are going to do with their crew.... The next time they would actually use such a big crew was going to be maybe in May.... They brought them in at great expense ... airfare, housing. They have been feeding them for a couple of weeks trying to get ready to go.... We didn't start the cleanup, physical beach crew cleanup until about the 25<sup>th</sup> of April. About 125 went out that time.... That was a month, almost a full month after the spill. That is when they started to aid the beaches. The ... cannery workers that were here and available before the boat crews could get here. [At that point] ... those contracts were being let [at a rate of] 10 to 15 a day. They were moving out fast, as fast as they could get the paper work through and get them out and they could get crews on them.... They would take some cannery crew if they were local and they knew them. Those cannery crews eventually were replaced by regular crew, so they were displaced again.

One of the most difficult aspects in the aftermath of the spill was the sheer number of issues with which to deal.

[Devastation] was one side of it and then there was a lot of activity, a lot of flurry of activity [with] the guys starting to get onto the spill cleanup.... We had so many things going on at that time. We had decisions to make. We were approached by a number of legal firms.... [One from D.C.] approached us. And they said, 'We are here to offer services, and we have experience and the horsepower to stay with you in this issue. This is going to be a long fight....' We had to defend their actions because we didn't consult the membership before we went ahead and made the move. As it happened, this [was] not going to be a case that has only involved one legal firm. There were many, many firms involved ... but we had to take a lot of heat from this.... I (also) remember taking a trip up to Anchorage to join in with a group of fishermen and attorneys negotiating with Exxon for compensation.... We are probably looking at sometime in May or even maybe in June for this issue. I was involved in that. There probably were 20 fishermen involved. It was a three-ring circus.

5.6.6 “You Just Don’t Understand. You Don’t Understand. We Are A Community In Crisis:” Emotional Devastation in Cordova in the Wake of the EVOS

In 1989, there seemed to be no respite in Cordova from the spill and discussion and activities surrounding it, as noted in this quote:

There was a lot of people bitching and complaining about Hazelwood and the oil spill and the damages. With everybody talking about it, it was a constant thing. Fishermen [were] getting pissed off because cleanup didn’t happen fast enough and no one was really prepared for it.

According to those I interviewed, Cordovans were on what might be described as an emotional roller coaster in the spring and summer of 1989. Frustration, anger, shock, disbelief, and in many cases physical exhaustion gave rise to other raw emotions expressed by men as well as women:

It was very tearful and just heartbreaking. People were just walking the streets and they would cry. I remember talking to ... two guys [who] were flying in a helicopter early on ... when the spill was still initially washing away down to the southwest. They saw the enormity of the impact.... They just cried.... I was in my home just crying, almost crying in bed trying to get to sleep. [It was] just a devastating event.

It was horrible.... Frantic.... People wanted to work and fix things, but underneath you had the feeling of not hysteria, grief.... One of the fishermen was on the Sound, and he was utterly grief stricken.

[The people] that had been out there and come back in during that few weeks, [their stories] were horrible. You really didn’t want to listen to them because you didn’t want to believe that that was really out there. You wanted to pretend it wasn’t, but you came to realize [it was true].... All the people kept coming back saying how bad it was.... Then you somehow understood that it really was there.

People were terribly upset. The first few days was just awful. You couldn’t eat a full meal.... The bakery, which was also a deli at that time, just brought in sandwiches in little bite-sized pieces over to CDFU. If you got hungry, you could just munch a little bit. It took days before people finally sat down. We were exhausted after little, if any, sleep by hardly anybody for two or three days, maybe longer.

There were so many issues going on socially in town as well as fighting [the] oil spill. The community's in trauma. Everybody is so angry. They are so sad. People ... walk down the street and you just cry.... I can't even describe Cordova in that first three years ... where we went ... mentally. Trying to tell somebody was [difficult]. 'You just don't understand. You don't understand. We are a community in crisis.'

A lot of people were very, very [upset].... A lot of women were weeping and it was just generally a nasty kind of malaise [that] settled over people. By the same token there was a lot of busy people getting geared up to go out and help on the cleanup and so that tended to take their focus off of their own personal problems perhaps and grief and give them an opportunity to get it out and do something apparently constructive.

[When I got to town] people were showing signs of being very, very tired. It was ... almost three weeks after the event. They had been running around ... trying to do whatever they could for three weeks straight.... We probably missed ... the height of the ... sorrow and people being devastated. I think I remember having the sense that the worst [had passed for people] ... and they were sort of back on the upward side of, 'Well, we do what we can.' There were still people who were very uneasy, nervous.... That is not a strong enough word to say about what this was all going to mean in the long term.

## 5.7 The Sounds of Silence: Narratives of Ecological Devastation

The first images of the EVOS I remember seeing were in my Environment and Society class in the fall of 2000. In particular, I recall a video called *Voices of the Sound* (1989) produced shortly after the spill showing graphic images of oiled birds and sea life, as well as EVOS cleanup activities. I remember averting my eyes from the television screen because I was so saddened at the plight of the helpless animals; at that time I had little knowledge of social impacts of the spill. As I consider my difficulty viewing such sights more than a decade after the fact – not to mention that I was seeing it on a television – I can hardly imagine witnessing the circumstances first hand as did most of those I interviewed. Opening the jar of crude oil sediment sitting on my desk, an EVOS

sample taken from Green Island in the summer of 2002, gives me some idea of what people who encountered the spill in 1989 experienced. And yet, I am able to contain my 16 ounces of Prudhoe Bay crude, an inconsequential amount of the estimated 11 million gallons that gushed into Prince William Sound. The narratives presented in the remainder of this chapter recall ecological devastation in the Sound.

A commercial fisherman recalled her memories of coming to town shortly after the spill when I asked her about the atmosphere in Cordova. She replied, “You could tell who had seen the oil first hand and who hadn’t.” When I inquired as to how she could tell, she responded:

The look on their face. You could look in their face and you could see it. It was that obvious.... I promise you, you could look at people on the street and you could see it in their eyes. It was the most ... incredible [thing].... I don’t think I had ever witnessed anything that dramatic. Maybe it’s because I haven’t been close to the front lines of war, but I had never ever, ever seen such a dramatic difference in people’s eyes. You could walk down the street, and you could say, [based on looking at people], ‘You’re real involved in the spill, but you haven’t seen it yet. You have.’ It was a black and white difference. It was an incredible difference.

Keeble’s (1991) accounts of those he saw who had been out on the Sound during the early post-spill period confirm this woman’s recollections: “He got a hollow look in his eyes, and said, ‘The place was devoid of life. Ever since I’ve felt a weird detachment from life....’ Each time I saw him, he looked gaunter and more hollow-eyed than before” (p. 74).

Descriptions of traveling by boat or plane across PWS after the EVOS, working on spill cleanup and containment efforts, as well as participation in wildlife rescue operations were recounted by those I interviewed with as much clarity as though the event had taken place recently, rather than more than a decade ago. Indeed, everyone I

spoke with who saw the spill first hand was clearly disturbed by their recollections of devastation it wrought. To differing degrees, the following narratives of Cordovans draw upon our senses of smell, hearing, sight, and touch.

We took off out here and we had all this stuff and we started driving. We drove across the Sound and we ... saw the tanker.... We were going toward the end of Naked Island between Naked Island and Knight Island and all of a sudden it was just solid oil. We were driving through this oil and it was six inches deep on the water. There was ... this boat coming at us.... There was no white [wake behind the boat]. There was nothing. It was just this boat slipping through this black stuff. It was just bizarre. The other thing was there was not one sound. Right now you open the windows, there is birds, gulls all this stuff. [At that time, there was] *nothing*. It was totally quiet. Everything was dead. It was pretty amazing really.... I think that was four or five days after [the spill].

It was a kind of eerie feeling.... You don't hear the eagles making their sounds; you don't hear the fish splashing in the water.... You just didn't see ... anything. You didn't see it, hear it. It was just like a black sheen over everything and everything was dead. There was nothing anymore. It was kind of an eerie sound and when you look around everything [is gone].

An Alaska Native fisherman told this poignant story:

I ... remember talking to my uncle.... He had been working on the oil spill ... and he was born and raised in Chenega his whole life.... [In] springtime [he would] go check out all the deer, because he knew where they were at. When he went to check them out [after the spill], in the deer dens, the baby deer had oiled seaweed in their mouth that the mother ... would bring back to their young.... I can still remember seeing him up there.... He was always just a jokester – just a wonderful, wonderful person.... [But] when I seen him, he looked at me and says, 'This is not good.' He head was down and [he was] white as a sheet. He said, 'This is not good.... It will never be the same.' He was right, it hasn't been the same.... [I heard] the stories of guys [who] were walking out there along Knight Island, the ones that were along the beaches. They could hear the birds, they could hear the life on the Sound at that time, and when the oil started coming from the *Exxon Valdez* and going along the islands and when it went by them it was complete silence.

The toxicity of the crude oil was overwhelming.

[After we heard about the spill on the radio] we took off for Point Ellington and got in there. By the time we got up between ... Green Island and Montague, we went in between there and then were going to cut to Hinchinbrook. Somewhere in there before we got to Green Island, I remember it was blowing, blowing. You could see white caps and then all of a sudden there were no more white caps and it was dark. We were running in the dark.... You could smell it.... I remember the smell. We got in early that morning and we got off the boat.... I went back down to my boat and I remember, it peeled some of the paint, my new paint job. [The oil we drove through] peeled some of the paint off of my boat ... sections of it were gone. Missing.

Just talking about the scent of the fumes caused people's faces to crease with repulsion – even those who only flew over contaminated areas. “When [the oil] was in the Sound, it was black and it stunk and you could smell it from miles away.” A young woman recalled, “I remember the smell ... was really strong. It gave a lot of people headaches.” An Alaska Native who worked on wildlife rescue described the smell of the crude oil as being “Like sticking your head inside of a can of diesel.” Others recounted the following:

I started working on the spill in the ... second or third day. I was out there right in the beginning.... I was probably in the first 20 boats that went out. We were at Main Bay keeping a boom in front of the hatchery and we didn't see that much oil. Then we ... drove down to Knight Island at one point into one of the bays that had ... a foot of oil on the surface of the water. That was I think when it really sunk in because it was so disgusting and so ugly. It made us sick even driving through it in the skiff, just from the fumes coming up. That was probably in the first couple of weeks of the spill.... When we actually saw all that oil it really started sinking in what it had done.

You could see it. It was so there. You could fly over it and they were cleaning it up and you could see the sludge... It was just thick and black and you could smell it. It was oil on your pristine beaches.



When I asked one commercial fisherman, an Alaska Native, what he would say to people who do not understand why the EVOS had such an impact on the community of Cordova, he replied:

It's kind of hard to [describe]. When you see a sea otter that's bug eyed shaking itself, biting itself, and clawing itself ... that's solid covered in oil ... and birds flopping around that can't get off the water and killer whales [trying to] blow.... The oil was so thick on the top of the water, when you pissed on the water [off the side of the boat], it wouldn't penetrate the oil. You tell somebody that and they look at you like, 'That's pretty thick. I don't believe it.' I was there and that's what happened, regardless of what people say. It was pretty tough.

Another of my interviewees who was in high school in 1989 had this to say when I asked her if she and her peers understood the significance of the EVOS:

You have a clue, but you don't really have any clue [about how bad it is] until you are out there, physically. When you're out there physically and you see it, how huge it was, how many animals, just how nasty it was, by touching it. Nobody has a clue, no matter what age you are, until you're really out there.

She went on:

R: [My boyfriend, now husband], did go out for quite a while and ... it was probably just a handful of kids that did leave school [to work on the cleanup]. It ... really impacted them a lot just to see how huge it was.

I: Did you guys have conversations [about it] when he would come back in?

R: Yea. It really upset a lot of 'em. When you see ... the animals and how they were just dying and floating away and how ... Exxon officials ... were just saying, 'Well, we don't know what to do with 'em so just leave 'em for a while. Just leave 'em in the oil. Just leave 'em.' ... They were overwhelmed, because they didn't have a plan. They had no clue what to do.... It's nasty when you think about the sea otters dying, and ... the birds poking holes in their necks so they can try to breathe. It was a nasty situation. It was very stressful.

Several narratives described how the *Exxon Valdez* crude oil made its way into the PWS water column:

When the water columns are full of plankton and other species I could only see maybe at the most 200 to 300 yards out in front of my boat. After the oil spill I could see 1,000 or 1,500.... It was transparent.

By the time the oil left out of the Sound all of the hydrocarbons were out of it. They'd already killed our plankton and everything that lived in the water columns. They had killed that, period. They had killed off our herring, our young herring going through it.... Our pink salmon streams, they'd killed that off.

After the oil spill I traveled back and forth between the Sound and here and at nighttime and even certain conditions of the day, you could see the oil 20 feet deep below you that had been [flowing] from [the] *Valdez*. You could see it getting deeper and deeper still it finally stopped. The leftover oil was on the bottom water level.

Realistically, after oil hit the beaches, there was little that could be done to remediate the situation.

You're realizing that you can't pick it up, once it's in the water. The tigers are out of the cage. Now what the fuck are you going to do? How you going to catch 'em; how you going to get 'em back in [the cage]? You can't. Then the shit [the oil] hits the beaches and it's really all over.

After a while, it got all over the beaches, everywhere.... They didn't really know how to clean it up and it was really frustrating to see the black sludge everywhere. Everywhere you used to get off the beach and tie your nets.... There used to be a family of eagles there where you fished and there was none because you would see 'em dead on the ground.... Cleaning up it was just a joke because they'd take a rock and just spray it off with something.... One rock at a time just doesn't do it. They were frustrated too, because they were like, 'Wow, this is huge. We have a lot of beach to do and we don't know what we're doing....' Those Alyeska and Exxon people that we saw, they were overwhelmed too.... How many rocks do you have to spray? Billions. It was frustrating.... We should have captured it when it was all out in the water before it hit the shore, before it got pushed out farther and farther, but [we] didn't. Then, you see the animals.... It happened in March, and even in July, we're still out there and ... they still didn't know what to do with some of the critters. There was so many dead critters. We'd pick 'em up and they'd say, 'Well, we're

full. We don't know what to do with 'em so just throw 'em back in.' It'd be like a whole deck full of dead sea otters, dead birds. What do you do with 'em? Just throw 'em back in? It was nasty. It was really hard. You don't *ever* forget the site of this disaster.

When I first heard [about] the oil spill I didn't understand the ramifications of the oil in the water.... It was a traumatic thing to go out there and see it, seeing from low water lines all the way up to high water lines black.... You think [the] tide is going to come in and it is going to wash away. Tides come in, tides go out and it is still there. The goo on the rock is stuck to the rock.

[It was] a real hit to the ecosystem.... We used to go out and get clams and shellfish and ... wherever the oil would move into these areas was going to be history for us. We knew that we were in trouble. We just didn't know how bad we were going to be in trouble. We had no idea that it would last as long as it did and is still lasting. It is still not over. You walk down the beaches and the oil just squirts out from underneath the gravel. [It] will be doing that I don't know for how many centuries or years now.... I haven't got a clue. I am not a biologist; I am just a human being, a fisherman. I [do] know the impact it has on land and water was dramatic.

One Alaska Native fisherman who worked on wildlife rescue efforts described the effects of the EVOS near Snug Harbor:

We had to go around and look for birds. We started seeing sheen at the entrance ... and when I got into Snug Harbor where we were going to all rendezvous, the prop wash was nothing but oil coming up behind it. You couldn't see no water. There was a boom stretched out right where we seined, right on the same beach.... [It] looked like just a seine sitting there and it had all the oil backed up all the way up in the Bay and not one skimmer there or anything pumping the oil off.... That place ... has currents that push everything in there – that's why it's so good for fishing, 'cause sometimes the current will shove the fish in there and then they come out and you can get a lot of real good fish in there. It acted the same on the oil – took it in there and they put a boom out which was the right idea to do to trap the oil, but no one would go in there to skim it so it just filled up the beaches. At the very head they tied a boom in there that raised and lowered with the tide to some extent, but there was big tides – the boom went up so far and then the oil went right over the top and right up in the spawning stream and trapped it as it came out.... When we went in there that time, that was when it really hit [me] that we were screwed. All that oil went ... up in the head and there was a little beach that we used to dig little clams off of ...and that was all black. Well, they're gone.

The situation was similarly described in harbors all along the path of the slick. “Sleepy Bay was just lathered with oil. It was deep. The beach was just black.”

I close this section with the comments of one individual who recalled how the lyrics of a song called *Nobody’s Girl* sung by Bonnie Raitt, played over and over in his mind throughout the summer of 1989. This came to mind as he attempted to articulate how he felt about Prince William Sound and how the EVOS impacted it. As he put it:

I visualized that song playing over footage of Prince William Sound with the snow on the beach and the sea otter.... [It was] playing in my head all year, just constantly.... It’s sort of an ode to tortured love but it fits what happens so well that it could have been written to fit the spill.

## **5.8 “It’s as Fresh Today in People’s Minds as it was the Day that it Happened:” Conclusion**

In this chapter I have presented narratives of Cordovans describing their experiences with and reactions to the EVOS. In many respects, I believe it is impossible for those of us who did not witness the spill first hand to fully comprehend the magnitude of the event or the ensuing ecological degradation and social devastation wrought by this technological disaster. To quote Edelstein (2000), “outsiders just don’t understand.” In the case of Cordova, the term “outsiders” has an even more significant meaning because of its physical location as well as its status as an RRC. My best efforts to understand proved somewhat fruitful, though I know in many cases – as reflected by their tears – it came at an emotional price for those sharing their painful recollections with me. During my interviews with them, Cordovans attempted to convey why the aftermath of the spill has been so difficult for the community. In doing so, they often used language of

sociologists to describe distinctions between natural and technological disasters, comparing the EVOS to the 1964 earthquake.

[The oil spill] was really an experience for me to go through. I went through the '64 earthquake.... [The oil spill] was something that could've been prevented, whereas an earthquake is a natural disaster. That can happen. This was something ... that shouldn't have happened.... There's a difference between an oil spill and a earthquake. [With] an earthquake ... you know the devastation it [created]. You can begin to rebuild. But I think of the oil spill as, 'How do you rebuild something that happened that is still there?' ... An earthquake you can get over. It will still have its memories, but you can put things back together. An oil spill is a little different because it's harder to put something like that back together.... You'll still see reminders of the earthquake but I don't think that's as devastating as the oil spill. That's what I'm sensing.... Do I believe that a lot of people have gotten over the oil spill? No. It's still there. It's as fresh today in people's minds as it was the day that it happened, because people have not gotten over it.

Comparisons of the EVOS to the earthquake addressed recreancy associated with the oil spill. Furthermore, narratives revealed frustration and concern with Exxon not taking responsibility for their actions and the ensuing damage:

[The earthquake] wasn't man made. Alaska has been having earthquakes for years and years and years. That's just something that you learn to live with; you expect it. Hopefully you don't get them ... but you know not to be surprised if you do start rumbling because it's just a part of where you live. What happened with the oil spill, that was man made. That was man made error. It was stupidity; it was lack of having things in place like they said they did in case something like this happened.

One of the things I learned ... from this event is that it is a lot harder for people to cope with or to get beyond a man made event ... that ... probably ... could have been prevented. It was a human error, or maybe a series of errors. It's harder to get over. If it was an earthquake ... an act of God, and you know there was nothing that we could do about it, it is easier for people to get beyond that. This was a preventable event.... I think that's more difficult for people to get beyond because it just makes you so frustrated. This whole thing could have not happened.

The idea that Exxon was recreant contributed to feelings of loss of control, as this account of spill cleanup activities reveals:

[Outsiders] make all of the rules.... [They] make all of these rules that we have to live with, whether we like them or not. A lot of the rules are kind of ... stupid and that is because they never listened to us before [they] made this rule.... They can't just treat some places in the remote coast of Alaska as if it is Cape Cod ... [as if the] same rules apply. That is not true. We could have told you that. [They] do these studies and ... make all of these rules based on this study, then [they] leave.... We have to live with what they have done. We have no control over it, but we have to live with it whether we like it or not.

A female commercial fisherman commented on what she saw as Exxon's arrogance following the spill:

The pain that I notice so well has nothing to do with them paying us off. It was the pain of the lack of the reaction. The arrogance, the feeling that it was Good Friday and everybody was off on their three-day weekend. Nobody was prepared. The response barge was buried in the snow.

The young wife of a commercial fisherman also noted, "It's not about the money."

[Exxon] could put this town back ... close to [what it was] before the spill. That's what 99 percent of people would like. That's what you always hear. 'Don't give us the money. Put the industry back to where it was so the people can go out and make the money that they used to make. Fine, don't give us the money, but fix it. You messed it up. You should be responsible for fixing it and you have the money. It's not like you didn't have the money to fix it.'

A non-fisherman became agitated as she said the following:

The biggest insult of it all is that they had all the permits ... and they were so blatantly in violation of the law.... To this day they are getting away with it 'cause I don't know if that Valdez fucking terminal over there had ever, ever fully complied to the [environmental] standards throughout the state. I don't think they have ever complied completely ... and they went ahead and let them renew that son-of-a-bitch pipeline contract.

This comment by a former commercial fisherman lays responsibility for the oil spill and its social and economic impacts squarely on the shoulders of Exxon:

I don't give a shit what Exxon says, they wiped us out. They committed murder with no gun. They used oil, and they killed a lot of good people in the process. We have lost about 90 people to cancer, heart attacks, and strokes. It's all stress related. I'm not saying fishing isn't stressful [because it is]. But I did it because I loved it.

Another former commercial fisherman rests blame with both government and big business:

As you watch all the people come into town and say, 'We are going to do this and we are going to do that,' there wasn't anybody to trust, and it proved out too. Even federal government ... [and the] Coast Guard... who in the government or who do you turn to for any kind of justice? There isn't any in that system, neither in corporate nor in government, there is actually *no* justice!

Finally, relating his feelings about the EVOS to his experiences in the Vietnam War, a commercial fisherman and Alaska Native said:

I was still pretty dog gone naïve in thinking that Vietnam was an accident in my lifetime. Maybe it was my fault [for serving]. But this time around, the way the government has approached it and what they've done, you can see that they really don't care about us. Nobody has stepped up to the plate to even recognize, to even say, 'Hey you guys have really, really shit on us.' It's just like the Vietnam thing when the veterans came back.... As a nation nobody really said, 'We're glad you guys are back....' The same thing here, no one really said, 'Hey, we really screwed up out there when we said we would make things work out for you.'

Recreancy on the part of Exxon, Alyeska, and state and federal governments weakened trust in these organizations and agencies. Following the EVOS, whatever faith Cordovans and others had in "the system" was diminished which, in turn, diminished social capital – particularly in the form of abstract trust. Arguably, ontological security is a prerequisite for fostering and maintaining social capital, and recreancy lessened ontological security among residents of PWS.

Considering the ecological-symbolic approach and RRC concept that contextualize social and psychological responses to the EVOS and other technological disasters, the intimate involvement of commercial fishermen and Cordova residents in responding to the event generated further stress. I am not aware of any other technological disaster in which “victims” were so closely involved with remediation activities – although as many accounts rendered above suggest, Cordovans had little or no control over containment or cleanup activities associated with the spill.<sup>17</sup> Disorganization, “corporate paralysis,” and what some deemed intentional “divide and conquer” tactics by Exxon exacerbated uncertainty and the emergence of a corrosive community in Cordova. This further diminished social capital in the community. These notions are discussed in greater detail in Chapters VI and VII of this dissertation.

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<sup>17</sup> This conceptualization does not include acts of terrorism such as 9-11 where victims – firefighters, military personnel, and other rescue workers – worked amidst the rubble of the World Trade Center Towers and the Pentagon. Except when referring to the research of others, I generally prefer to use the term “survivors” with respect to residents of the EVOS impact area, rather than “victims.”



## CHAPTER VI

### DISCUSSION

#### 6.1 Introduction

This chapter addresses the remaining research questions of this dissertation. The first section examines relationships between individual stress, collective trauma and social capital in Cordova following the *Exxon Valdez* oil spill (EVOS), exploring the notion that diminished social capital contributed to stress at micro, meso, and macro levels. The second section discusses relationships between social capital and the emergence of a corrosive community. Next, I investigate how lifestyle changes and lifescape changes are related to social capital, discussing how altered patterns of everyday life in Cordova, as well as diminished fundamental trust and ontological security have affected community interactions.<sup>1</sup> Finally, I examine relationships between secondary disasters and social capital following the EVOS. In addition to addressing ongoing litigation as a secondary disaster, I propose that diminished social capital represents a form of secondary disaster for the community of Cordova.

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<sup>1</sup> As discussed in Chapter II, ontological security is “the confidence that most human beings have in the continuity of their self-identity and in the constancy of the surrounding social and material environments of action” (Giddens 1990:92).

## **6.2 Social Capital, Individual Stress, and Collective Trauma Following the EVOS**

As discussed in Chapter II, numerous empirical studies have addressed important inquiries about social and psychological impacts of technological disasters. Moreover, conceptual distinctions between natural and technological disasters have developed as a result of this empirical research.<sup>2</sup> One of the primary distinctions between natural and technological disasters is long-term, chronic stress. Technological disasters tend to generate chronic, long-term negative mental health outcomes that natural disasters do not.

Using Hobfoll's (1988) COR model, research in Cordova documents long-term stress following the EVOS, particularly among commercial fishermen (Arata et al. 2000; Gill and Picou 1998; Picou and Gill 1997). Again, according to this model, stress ensues following resource loss, when there is threat of resource loss, and/or when resources are invested without gain or return. When loss of one type of resource is experienced, this often results in loss or depletion of other types of resources; conversely, resource gain in one area tends to produce gains in other areas (Hobfoll 1991). Of greatest import for the present research question, "As COR theory suggests that stress depletes resources, it would follow that a common, traumatic stressful event would deplete resources widely within a social system" (Hobfoll 1991:194). Moreover, because social support is conceptualized as a form of resource in the COR model, the "pressure cooker effect" (Hobfoll 1991:194) of shared trauma has implications for social capital following the EVOS and other technological disasters.

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<sup>2</sup> For a discussion of increasing challenges associated with classifying events as "natural" or "technological," see Picou, Marshall, and Gill (2004).

Supporting quantitative evidence on social impacts of the EVOS gathered between 1989 and 2001, narratives collected during my interviews describe resource losses of: (1) objects (e.g., natural resources, fishing gear, shelter, physical possessions)<sup>3</sup>; (2) conditions (e.g., social support, employment, physical health, seniority, tenure); (3) personal characteristics (e.g., high self-esteem, self confidence, sense of optimism, social competence, mental health); and (4) energies (e.g., money, time, knowledge, savings) (Hobfoll 1988, 1989, 1991). Narratives presented in the following sections reveal the interrelatedness of various forms of resources in the COR model and how loss or threat of loss to these in the wake of the EVOS are related to social capital in Cordova.

#### 6.2.1 “The Devastation is Mind Numbing:” Objects Resource Losses Following the EVOS

Several impacts directly associated with the oil spill represented object resource loss or threat of loss. One of these resources was the natural environment of PWS, especially in the immediate aftermath of the EVOS:

[We] watched this map that was growing ... [a] daily changing map of the spread of the oil ... [and wondering] what would be left. It was very stressful, very stressful, because I had fished here for 17 years before the oil spill.

Loss of natural resources in PWS was not only immediate, but also ongoing:

The loss of the Sound [was horrific]... The devastation is mind numbing.... Our killer whales have disappeared.... I watched [our sea lions] swim through that shit [the crude oil] and there is hardly any of them

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<sup>3</sup> According to my review of COR research, the COR (Hobfoll 1988, 1989, 1991; Hobfoll, Lilly, and Jackson 1992) does not conceptualize natural resources as objects resources (see Hobfoll, Lilly, and Jackson 1992:129). However, Arata et al. (2000) do include items that conceptualize natural resources as objects. I include them here, especially considering the fisheries of PWS as a form of object resource for Cordovans.

left. A lot of our dolphins died. The birds died, thousands [of them].... It was sick. Sick (*crying*). It wasn't just salmon. It was everything: halibut, shrimp, crab.... We had it all, and we had nothing when it got done. It killed everything. Some of it, I don't think is ever going to come back.

From an ecological-symbolic perspective, particularly because Cordova is an RRC, damage to the PWS bioregion represents a profound form of object resource loss. Furthermore, because the extent of physical damage caused by the oil has been disputed for 15 years, there remains a general uncertainty in the community. In COR terms, what may be referred to as chronic uncertainty represents a “threat” to Cordovans and their way of life. This threat serves as an additional chronic stressor, as one commercial fisherman put it, “I am afraid of the future. I don't know that there is much of a future in [fishing].” Many Cordovans are not simply concerned for their current way of life, but for their children's, as well:

They want all their fishing. They want to be able to go fishing. That's what they have done; that's what their families have done from generation to generation. They want to pass it on ... and there is going to be nothing to pass on. That is the part that I think hurts them the worst. It's going to go away and their great-grand-children will never be able to go out on the boat and do that.

Uncertainty about the fishing industry was common in narratives of my interviewees:

The uncertainty is different [than] being uncertain how well your season is going to go, knowing that you can fish and catch fish and provide for your family. That is a different [kind of] uncertainty than the uncertainty ... of seeing that much death and decay and wondering if there is going to be anything left to provide for your family.

According to quantitative data collected from Alaska Natives and commercial fishermen in 2001 (n=176), 63.4 percent of respondents believe Prince William Sound will never fully recover from effects of the oil spill (Gill 2002). Another 24.2 percent

indicate it will take 50 years for the Sound to recover. In 2001, 76.2 percent of Alaska Natives and commercial fishermen surveyed reported “high loss” or “some loss” of PWS resources in the past three years; 22.0 percent indicated these resources had “remained the same,” with just 1.8 percent reporting “some gain” or “high gain” in PWS resources. During the same period, 63.2 percent of respondents reported “high loss” or “some loss” of subsistence resources since the spill; 33.1 percent indicated subsistence resources had “stayed the same,” with the remaining 3.7 percent responding that there had been “some gain” or “high gain” (Gill 2002) (See Table 6.1).<sup>4</sup>

Indeed, the beginning of each fishing season – the so-called “anniversary”<sup>5</sup> of the spill – is an unpleasant reminder of resources lost or perceived as lost as a result of the oil spill. “It is depressing year after year.... Every fishing season people are talking about the oil spill. We had the [10<sup>th</sup>] anniversary so it re-traumatizes the community. Every time they don’t make a good season then all those feelings come up.”

As might be expected, when a fishing season is poor thoughts of the EVOS are more prevalent in Cordova.

This year [the stress] has been a lot more, because it’s been a bad season. [I’ve had] a lot more thoughts about the oil spill and now we’re coming into cycle to see how it’s really damaged us and we have had a bad year so of course, that brings bad thoughts.

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<sup>4</sup> See Appendix A for Gill (2002) methodologies.

<sup>5</sup> Many Cordovans I interviewed hesitated as they used the term “anniversary” with regard to the EVOS. As one Alaska Native, a third generation commercial fisherman, explained, “I wouldn’t call it an anniversary. I’d call it a memorial. Anniversaries are something we celebrate; weddings [are] something happy. [The EVOS is] not that happy – it’s a death. [It’s] the death of the Sound, the death of this town, the death of a lifestyle. You don’t celebrate that.”

Table 6.1 – 2001 Self-Reported Status of Objects Resources Among Alaska Natives and Commercial Fishermen in the Past Three Years\*

<u>Type of Resource</u>	<u>High Loss</u> (%)	<u>Some Loss</u> (%)	<u>Remained the Same</u> (%)	<u>Some Gain</u> (%)	<u>High Gain</u> (%)
Personal Transportation	8.2	27.1	56.5	6.5	1.8
Commercial Fishing	48.1	35.4	11.4	5.1	0.0
Subsistence Resources	11.7	51.5	33.1	3.7	0.0
Prince William Sound	25.0	51.2	22.0	1.8	0.0
Fishing Gear/Technology	7.5	21.7	43.5	26.1	1.2

\*Gill 2002 (N=176).

Problems in the fishing industry serve as chronic reminders of resource loss, particularly the devaluation of seining and gillnet permits.<sup>6</sup> Although this devaluation was not significantly correlated with anxiety, depression, or PTSD among commercial fishermen in 1995 (Arata et al. 2000), it was frequently noted in narratives I collected (e.g., “[Before the EVOS] permits were going for over \$200,000 and now they are going for \$20,000.”) Moreover, 83.5 percent of Alaska Natives and commercial fishermen surveyed in 2001 indicated “high loss” or “some loss” with respect to commercial fishing as a resource; 11.4 percent of respondents reported this resource “remained the same,” with the remaining 5.1 percent reporting gains (See Table 6.1). In 2000, when asked to respond to the question, “Has the local economy gotten better, gotten worse, or stayed the

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<sup>6</sup> See Chapter I of this dissertation.

same since 1989?" 92.5 percent of Cordovans believe the local economy has gotten worse (Picou et al. 2001). To more fully appreciate these data, they should be compared with data from Petersburg, Alaska, the control community for this study (See Table 6.2). This indicates loss of objects resources as well as energies resources.

Table 6.2 – Perceptions of Cordova’s Local Economy Since 1989\*

<u>Question:</u> In the past 11 years has the local economy:	<u>Cordova</u> (n=161)	<u>Petersburg</u> (n=157)
Gotten Better	2.5%	6.4%
Gotten Worse	92.5%	74.5%
Stayed the Same	5.0%	19.1%

\*Picou et al. 2001.

\*\*p<.001

Demise of the herring fisheries – believed by every single person I interviewed to be a direct result of the EVOS – was articulated as one of the most tangible forms of object resource loss in the Sound and to Cordova.

I am no scientist, but ... I have heard a lot of scientists say that the oil spill had a huge affect on the herring population and it has been a downward spiral ever since. That is probably the single greatest current effect of the oil spill on this town – the fact that there is no herring fishing left.... The demise of the herring as a result of the spill is the probably the biggest single remaining effect on Cordova. No more herring. That could be attributed directly to the spill.

There’s no herring and they could 99 percent [blame] it on Exxon and the oil spill. [The EVOS happened in March], when herring were in the

Sound. [That is a] sore spot to a lot of people. It really causes a lot of heartache [over and over] again.... [Exxon is] saying everything's fine and people here are going, 'No, it's not fine.'

[Fishermen are reminded of the oil spill] whenever they close the herring season again, because they looked so forward to that. It [used to be that you] had the winter and then, 'Here comes herring. We are going fishing again... ' [Now] everybody prays and crosses their fingers that they will have a herring opener again.

The loss of herring as a resource also manifests itself in terms of financial (energies) resource loss. As one non-fisherman put it, "The herring was always the bread and butter of the community." Clearly, however, the herring fishery season represented more than just a financial resource. The following narrative of the wife of a fisherman reflects broader environmental implications of this resource loss:

To go right to the heart of it, one of the most significant changes from the spill is the herring ... They [Exxon] can't tell you, or me, or anyone in this town that the lack of herring is from anything but from the spill.... The first couple of years made it look like there was going to still be a fishery, but the fact is that the fish that were born and released to the ocean ... their spawn encountered a tainted environment that had no food source.... Scientists have documented countless situations of deformities and poor growth situations.... You go right to the heart of the whole environment when you take away the basis for that lower level of life, then you take away food for every follow up consumer after that. The birds and the animals that feed on everything get affected. One of the other many irritations is that [Exxon] totally denies that the herring [demise] is from the spill, and that is just total b.s. You can't tell me that you dump that much oil and [there are no effects].

A commercial fisherman explained how the loss of the herring fishery continues to affect her, reflecting ecological-symbolic aspects of the loss of this natural resource:

I am still sort of affected by this whole not being able to fish herring. I think that was the saddest part for me by far.... That was a really fun thing to do.... I just think it's such a bummer that ... the whole thing was taken away from us. I [feel] sadness and frustration at that. It was so much fun to go out in the Sound that time of year [when it was] really changing from winter to spring.... You have all the marine life, the birds and sea lions



and they're all chasing these herring and the whales. Just to miss all that ... [has] been a pretty big impact.... Herring was a huge part of this town – the economy, the liveliness, the culture – and that's gone. I realize that it's not 100 percent from the oil spill, but that was probably one of the triggers that caused the total decline of that stock.

Even people unwilling to blame all of Cordova's economic problems on the EVOS believe there are no herring fisheries as a direct result of the spill. This suggests a sort of "collective" object resource loss for the community.

I really don't think that town's economy right now is directly related to the oil spill. You just can't blame it all on the oil spill ... but I do blame the [loss of the] herring on the oil spill because you just don't fish that for years and years and all of the sudden have an oil spill and never fish it again. There has got to be some correlation there.

Other forms of object resource losses were also cited as stressful, as indicated by a former Cordova resident who has moved from the community for financial reasons: "People are going bankrupt. You see people losing their homes, losing their boats, and having to sell this, having to sell that. We should have had help a long time ago, long time ago. There has been nothing done." Narratives of this nature are consistent with quantitative data on the EVOS. For example, according to Arata et al. (2000) among commercial fishermen surveyed six years after the EVOS, having to sell possessions was significantly correlated with anxiety (.23;  $p < .01$ ), depression (.26;  $p < .05$ ), and Post Traumatic Stress Disorder (PTSD) (.24;  $p < .01$ ). In 2001, almost one-third (29.2 percent) of Alaska Natives and commercial fishermen surveyed reported losses of fishing gear or technology (See Table 6.1).

### 6.2.2 “There Are Similarities To Being In A War:” Conditions Resource Losses

#### Following the EVOS

In the COR framework, among resources considered “conditions” are social support, employment, and physical health. As a primary consequence of damage to the ecological environment of PWS following the EVOS, the employment and thus financial stability of many Cordovans was threatened. This is reflected in 2001 data collected from Alaska Natives and commercial fishermen in which 64.3 percent of respondents indicated they experienced losses in financial stability since the EVOS (See Table 6.3). Moreover, keeping in mind that threat of loss is conceptualized as a form of stressor in the COR, the downward turn in the commercial fishing industry following the EVOS represented a significant threat to many Cordovans with respect to their job status. Data collected in 1995 from commercial fisherman reveal significant correlations between changes at work and depression (.22;  $p < .01$ ), as well as changes at work and PTSD (.19;  $p < .05$ ) (Arata et al. 2000).

As revealed in narratives presented in Chapter V, concerns about possible financial impacts of the loss of PWS fisheries were immediate following the EVOS, as epitomized by this statement: “I was wondering how I was going to make a living.” This threat of loss continues to exist year after year. As one commercial fisherman noted, “[Before the oil spill] we never lived with continual uncertainty. We might on a year-to-year or month-to-month basis, but not 14 years of uncertainty. It is the length of uncertainty.”

Table 6.3 – 2001 Self-Reported Status of Conditions Resources Among Alaska Natives and Commercial Fishermen in the Past Three Years \*

<u>Type of Resource</u>	<u>High Loss (%)</u>	<u>Some Loss (%)</u>	<u>Remained the Same (%)</u>	<u>Some Gain (%)</u>	<u>High Gain (%)</u>
Good Marital/Partner Relationship	12.3	12.3	52.5	15.4	7.4
Family Stability	8.4	16.8	52.1	17.4	5.4
Time With Loved Ones	12.4	27.8	42.0	14.2	3.6
Personal Health	8.8	42.4	44.1	4.1	0.6
Spouse's/Partner's Health	12.6	37.7	46.4	3.3	0.0
Financial Stability	30.4	33.9	23.4	10.5	189

\*Gill 2002 (N=176).

According to narratives of those I interviewed, the threat of loss to object and energies resources influenced conditions resources, including relationships with family members and community members.

Every year on the anniversary there are times that I have gotten really stressed out because my husband and people want to talk about the same thing over and over again. They don't go forward at all. It is just at the same spot. They can't get passed that. I get frustrated with that in people. You try to talk about it and you end up having an argument. That causes stress still.... It is every day in your face from one point of view or the other.<sup>7</sup>

The COR model refers to a "good" marriage as one form of condition resource.

Responding to a 2001 survey question regarding about marital/partner relationships in the

<sup>7</sup> This narrative broaches characteristics of a corrosive community, which will be dealt with later in this chapter.

past three years, almost one-quarter (24.6 percent) of Alaska Natives and commercial fishermen reported “high loss” or “some loss” of this resource (Gill 2002) (See Table 6.3). According to several people I interviewed, many marital relationships in Cordova were strained – sometimes resulting in divorce – in the aftermath of the spill. Most narratives primarily attributed this to financial reasons:

It was not a good season at all this year.... [The mentality that] ‘It will be better next year’ is one of the things that causes some of the marital problems. It causes ... [low] self-esteem. [We tell ourselves] ... ‘I will bring it in next year....’ That doesn’t happen so a lot of things go wrong.

There have been a lot more divorces. They say that people divorce when they have money – that they are more likely [to do so] when they feel comfortable. I don’t think that is necessarily the case. I think sometimes if you get to the point where you feel like it is hopeless and no matter what you do you can’t get ahead, people get disgusted with it. They are not as tolerant with each other.

A commercial fisherman, wife, and mother articulated how going out to work on the spill cleanup affected her relationship with her husband and family living in the Lower 48:

I was a basket case. [My husband felt] ... that I was deserting him [with the children] when it wasn’t my turn to go. I was supposed to be there. [Looking after the kids] is my obligation during this time of the year, and I am blowing it all off. It was pretty heavy there.

The spouse of a commercial fisherman commented on tension between couples associated with financial issues perceived to be spill-related:

[Maybe] your wife [is] at work so therefore she can’t help as much with your fishing industry job as you need her to. Then there’s a conflict of, ‘I need you to help me to put this net on the boat.’ She’d say, ‘No, I can’t. I’m at work.’ [He’d say], ‘Who’s gonna pick up the kids?’ [She’d say], ‘I’m at work. You have to go.’ [Then he’d say], ‘No, I’m fishing, I can’t do it.’ There’s a lot of tension between couples: ‘Where’s the money coming from and how do we pay this bill and who takes care of what and how do we spread ourselves so that we can get everything done?’

A mental health care provider gave this compelling narrative, providing a professional's perspective regarding impacts on families associated with the EVOS:

Almost everybody that was here during the oil spill will tell you that that is part of the reason why their family is falling apart or why they are still depressed. They may come out first and say, 'My dad drinks too much and [my parents] fight a lot. I really feel bad about that....' Then maybe two [counseling] sessions down the road [they'll say], 'If they just got their money from the oil spill, things would be better.' I am sure they are hearing that from the family, but it re-traumatizes the kids. Within three [counseling] sessions I would say probably 85 percent of those kids that I see that come in with depression, whose families were here during the oil spill ... they brought something up about the oil spill or the secondary issues related to the lack of fishing or income.

Numerous narratives revealed how relationships between relatives have been strained in the aftermath of the EVOS:

I think there are similarities to being in a war because it just totally disrupts your life. Families were split apart, and moms and dads were trying to make money or clean up the oil.

[My brother and I] had this huge yelling match. I have never been as confused and upset, dwelling on the fight between me and my brother. [I'd] never been there before in my life. It really scared me. We kissed and made up finally about a month later, which has been a wonderful thing.

[My mother said], 'Because of your family don't you think you need to look at your priorities, and don't you think your family needs you more?'

It is a very stressful thing.... Kids can feel it. Wives can feel it. When you go into a room and your husband is tensed and stressed, then you need to make him feel [less] tension.... The wives are trying to say, 'Okay let's make everything run smoothly now.' It's kind of a different role that they have in their relationships in the household.

Narratives also revealed relationship strain between non-relatives:

Watching the friendships disintegrate [was so difficult]. People who had been friends for their whole lives [were] not speaking (*crying*). I wasn't involved in that [but it] ... split a lot of friendships, lifetime friendships.... People were just shell shocked.

[This one guy I'm thinking about], he's a good fisherman, but he doesn't have to go and screw somebody.... I watched him screw my relative, watched him screw ... me. He's pressured to make those bills and he's a good fisherman. No doubt about it. [He didn't used to be that way.] No. No, he never [was like that before the spill].

Commercial fishermen surveyed in 1995 reported negative changes in their relationships with relatives and nonrelatives (Arata et al. 2000). Correlations were found between changes in relationships with relatives and levels of anxiety (.28;  $p < .01$ ), depression (.37;  $p < .01$ ), and PTSD (.32;  $p < .01$ ). Stronger correlations were seen between relationships with nonrelatives and levels of anxiety (.38;  $p < .01$ ), depression (.43;  $p < .01$ ), and PTSD (.40;  $p < .01$ ) among respondents.<sup>8</sup> More recent data (2001) suggest Alaska Natives and commercial fishermen perceive losses in "family stability" (25.2 percent) and "time with loved ones" (40.2 percent) in the past three years. Just more than half (52.1 percent) of respondents indicated family stability had "remained the same" since the oil spill; the remaining 22.8 percent reported gains in this resource. With respect to time with loved ones, 42.0 percent of respondents indicated no change in the past three years; 17.8 percent reported gains (Gill 2002) (See Table 6.3).

Strain on relationship networks in Cordova influenced other resources, as well. Again, in the COR model, a loss or threat of loss of one type of resource often leads to other forms of resource loss (Hobfoll 1991). Fear related to this possibility was expressed by a lifetime Cordova resident and commercial fisherman:

I am afraid of not only losing my business, but losing my close family ties, my wife.... That worries me the worst on where I am going in the future not only financially, but [with] my family. That pretty much sums it up.

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<sup>8</sup> Survey items concerning respondents' relationships with relatives and nonrelatives were on a four-point scale of (1) improved, (2) remained the same, (3) suffered but did not end, and (4) ended (Picou and Arata 1997).

Viewing social capital as a form of condition resource (i.e., good relationships with others), it follows that there is a relationship between diminished social capital and stress. Moreover, in much the same way that seniority and tenure are considered condition resources in the COR, trust, ontological security, associations, and norms of reciprocity – conceptual relatives of social capital – may also be considered condition resources.<sup>9</sup> Seniority and tenure imply security, a sort of “certainty” or at least assuredness about the future. Diminished trust, ontological security, and changes in norms of reciprocity accompanying technological disasters foster feelings of uncertainty, insecurity, and control – which are manifested as personal characteristics resource losses.

Physical health is another form of condition resource that was perceived as diminished among Alaska Natives and commercial fishermen following the EVOS. More than half (51.2 percent) of reported losses in personal health in the past three years; 44.1 percent “remained the same;” and 4.7 percent reported gains (See Table 6.3). Regarding their spouse’s or partner’s health, 50.3 percent reported losses; the remainder indicated their partner’s health had “remained the same” (46.4 percent) or reported gains (3.3 percent) (Gill 2002). Perceived changes in physical health among commercial fisherman reported six years after the EVOS were significantly correlated with anxiety (.32;  $p < .01$ ), depression (.33;  $p < .01$ ), and PTSD (.38;  $p < .01$ ) (Arata et al. 2000).<sup>10</sup>

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<sup>9</sup> Human capital and cultural capital may be incorporated into Hobfoll’s (1988) COR framework as types of conditions resources, providing additional opportunities for future research directions with respect to natural and technological disasters. This is discussed in Chapter VII of this dissertation.

<sup>10</sup> The item measuring changes in physical health was a three-point scale, which read: “Concerning your physical health, since the *Exxon Valdez* oil spill, do you perceive yourself as having (1) more health problems (2) less health problems, (3) or the same amount.”

Physical manifestations of stress people associated with the events surrounding the oil spill were recounted in many narratives of fishermen and non-fishermen:

I stuffed [my emotions down]. That's how I sometimes do with my emotions, I stuff them. I was diagnosed with a stressed related disease in [the fall] of '89. A sudden stress is what brings this disease on.... It's not caused by stress but a huge stress will bring something like that on. The doctors actually thought that the stress of the oil spill ... maybe had brought it on.

[1989] was a tough year.... As healthy as I have always been, I actually suffered angina that fall.

On top of all my other daily stuff I was having to dig up all of this paperwork bullshit for something that we had no control over or didn't want nothing to do with. It was eating on me.... I was stressed out. I was letting it get to my stomach.... There was some stuff that I couldn't even eat because ... I had an upset stomach a lot in those days.

I think eventually I am just going to simply drop dead. I'll have a heart attack because I internalize all my stress. I cannot take it out on [anyone because] ... it's nobody's fault – nobody that I associate with. The people I would [hold responsible] would be the CEO that wouldn't show his face when Exxon happened. That son of a bitch that stood up in front of our auditorium and said, 'We'll make you whole.' Right, and lie again will you now? I laugh because if you don't laugh you feel like bawling your eyes out, and there's just no point to it. You can only struggle for so long and then after a while you just lose the will.

### 6.2.3 “I Don't Know Why [The Spill] Had Such A Great Impact On My Sense Of Well-Being:” Personal Characteristics Resource Losses Following the EVOS

In the COR framework, mental health is a personal characteristics resource. As defined by Hobfoll (1988), mental health includes self-esteem, self-confidence, sense of mastery, sense of optimism, and social competence. Narratives of commercial fishermen, as well as narratives *about* commercial fishermen, articulated negative changes in these resources following the EVOS. One Cordovan described psychological impacts of the



EVOS for commercial fishermen in the following narrative, which also reveals changes in family dynamics:

There is a role reversal in the fact that the men aren't bringing income in and during those months the spouses are supporting the family. If you look back at the culture, and the ego, and the ... esteem that was given to being the captain or self-sufficient fishermen that made a great deal of money at one point in time.... [They] could buy all the things that their family needed and provide all winter by working in the summer. Their wives didn't have to work. If they did work, it was for secondary things. It wasn't to provide for the family. There is definitely a role reversal. Because the males aren't trained, or some of them aren't trained, to do other type work, they frequently don't. They find menial jobs or they don't work, and it causes marital conflict. One other issue, and it is partially cultural, is if you are a fisherman, you are a fisherman.... You are not a carpenter. You are not a cashier. You are a fisherman. For several generations that was very true, up until a little bit after the spill.... That is not the case now. They still have that part of their fishing culture, that a fisherman is a fisherman. They [are not] mentally able to make that transition. They are still holding on to that belief.

During my interviews, commercial fishermen expressed feelings of low self-confidence and low self-esteem they related to impacts of the EVOS.

When the [oil spill] came it caused so many feelings to surface and so many feelings of inadequacy.... [Before the oil spill] I was on top of the world. I was feeling good. By '93, you didn't know. My self-confidence in the ability to be able to take care of my family dropped 100 percent. In [the early '90s] when I sold my home, I was ready to kill myself.... The depression was bad – really bad. A lot of all this makes me [feel] a loss of all self confidence as a person.... When you lose hope and ... you're making a third or a quarter of what you used to make, you lose self-confidence in your ability. It really isn't our fault. The whole situation isn't our fault.

I always prided myself as being [a good fisherman].... I'm still a good fisherman, but I don't solely make the money like I used to.... Sometimes [my wife] says stuff that I take [to mean] I'm not making enough money to support the things we're used to doing.

That's the sad part.... When you're out there working in the Sound ... you're able to feed your family. You're making a living.... [It's] all those things that give you a feeling of well being where you have accomplished

something. Where you are able to provide and your kids are off to [college]. It's self-esteem. You know you're being productive. Now, it's not like that. Those things have changed.

Shaking his head, one commercial fisherman stated, "I don't know why [the spill] had such a great impact on my sense of well-being. I don't know why."

As presented in Table 6.4, in 2001 more than one-third of Alaska Natives and commercial fishermen reported losses in various forms of personal characteristics resources. Losses were reported in "motivation to get things done" (43.6 percent), "feelings of personal success" (46.5 percent), "feeling valuable to others" (32.3 percent), "feeling control over your life" (72.9 percent), "feeling independent" (38.6 percent), and "feeling that your life has meaning" (30.5 percent) in the past three years (Gill 2002). Gains in these areas were minimal, though many respondents reported these aspects of their lives had remained the same in the past three years.

Table 6.4 – 2001 Self-Reported Status of Personal Characteristics Resources Among Alaska Natives and Commercial Fishermen in the Past Three Years \*

<u>Type of Resource</u>	<u>High Loss</u> (%)	<u>Some Loss</u> (%)	<u>Remained the Same</u> (%)	<u>Some Gain</u> (%)	<u>High Gain</u> (%)
Motivation to Get Things Done	7.1	36.5	44.1	10.0	2.4
Feelings of Personal Success	16.5	30.0	36.5	15.3	1.8
Feeling Valuable to Others	7.6	24.7	50.6	14.7	2.4
Feeling Control Over Your Life	44.1	28.8	42.4	12.4	1.2
Feeling Independent	9.9	28.7	47.4	10.5	3.5
Feeling That Your Life Has Meaning	7.6	22.9	51.8	14.7	2.9

\*Gill 2002 (N=176).

Narratives of spouses of commercial fisherman I interviewed addressed many of these themes.

It was hard on a lot of the guys to say, 'I'm not supporting my family anymore.' I feel somehow their self-esteem, your feeling about yourself was really far down.... It's always been put into everybody's head that the guy's supposed to be the head of the household and he's supposed to support the family. [It's] just how people were brought up.... It's tough for people. It's tough for guys to have to admit that they are not pulling their [weight] like they think they should.

I think it was hard on [my husband when I went to work] because he kept saying, 'Just 'cause you're working now doesn't mean [I haven't] ... taken good care of you.' That came up a lot.... I don't know if I had said stuff to make him feel like that.... I think that was a little bit hard on him, looking

back. I don't think that's what he wanted. I think he wanted me to stay home because the kids were still involved in everything.

Men are used to being cast in the role of the breadwinner. If nothing else, you just provide a good living for the family.... Now a successful fisherman is a fisherman that has got a wife with a good job.... When you are dealing with ... issues of self-esteem, men value themselves by the way that they can make a living – how much money they can make. When that ability to make a good living is taken away from you, you start becoming more frustrated. You probably drink a little bit more, become a little more bitter, become a little more pissed off, become a little more prone to be violent.

Mentally, it hurt [my husband] badly because a man places his value with what he has done.... A lot of the fire, the energy, the love of life that he used to have, he doesn't have anymore. That's not something you can get back. He's 60. He's not the only one. A lot of the guys are just going through the motions and just hoping they can learn to do something else.

Changes in family dynamics as described in these narratives – especially if they are occurring throughout a community – potentially affect social structure and thus social capital, which is dependent on a stable social structure for its existence. Notably, feelings of uncertainty and personal characteristics resource losses were not limited to men, as this narrative of a female commercial fisherman demonstrates:

Do you completely cut your loses, get out of fishing, and find a new career? I went through hell and this huge identity crisis in my mid-30s trying to figure out what I wanted to do. Then I found fishing and I loved it. I was finally doing something I really wanted to be doing. I invested all my money in it.... If I knew exactly what was going to happen with the settlement and how much I would or wouldn't get I could make a coherent plan. But I don't know that. Do I overturn my whole life and get out of here or do something I don't want to be doing and move from a place I like ... and then two years later we get enough money so that if I would have stayed here I could have kept doing what I wanted to be doing? Or do I stay here and keep doing it? [The stress] just is increasing as it has gotten more and more uncertain and taken longer and things have gone back and forth.

Because natural resources of PWS were impacted by the EVOS (object resources in the COR model), pressure associated with making a living in the fishing industry also increased. This pressure, coupled with loss of self-confidence, has been emotionally devastating to some commercial fishermen:

It's always ... a lot of pressure to perform ... and make a living. That pressure is unreal now. It's pressure. I *have* to [do well fishing]. I *have* to. I can't just be average or else I won't make it. It's, I *have* to. It's not as a relaxing thing anymore.... You're always doubting your decisions. [You have] less self-confidence and then you make a decision.... You're always checking yourself. You're always going, 'Was that right?' ... Before I wouldn't ask.... I knew.

#### 6.2.4 "There Isn't Any Relief From The Effects Of The Oil Spill:" Energies Resource

##### Losses Following the EVOS

Immediately after the oil spill, Cordovans were investing considerable energies resources (i.e., time and money) in dealing with threats to the fisheries and other natural resources in Prince William Sound by attempting to contain the oil and clean up the oil. In subsequent months and years they were also occupied addressing economic and social issues associated with the disaster, as well as participating in litigation processes. Commonly, accounts of the pace of life in the months following the EVOS reveal how spill-related activities contributed to stress:

The stress I experienced is ... a kind that [develops] when you are working seven days a week, 12 hours minimum, 14 or 15 hours sometimes, off and on for weeks and months on end. It is that kind of a stress.

In the 15 years since the oil spill, energies resource losses have continued to impact Cordovans, as this narrative describes:

You are having to keep busy. You are having to keep going. The kids still need to eat. You still have bills and mortgages to pay.... The fisheries are declining; there are more regulations, shorter fishing times. There are so many things that bring it up every single solitary day because it all goes back to pre-Exxon [when] things were different. There is no money in town. The cost of living is constantly going up. The city is wanting more and more money from you. The price of gasoline is going up.... It is like there isn't any relief from the effects of the oil spill, none.

As shown in Table 6.5, more than two-thirds (70.6 percent) of Alaska Natives and commercial fishermen surveyed in 2001 reported losses in adequate income in the past three years (Gill 2002). Seven out of 10 respondents (71.2 percent) indicated losses of savings or emergency money. These quantitative data regarding energies resources reflect changes – loss – of important objects resources, including commercial fisheries.

Table 6.5 – 2001 Self-Reported Status of Energies Resources Among Alaska Natives and Commercial Fishermen in the Past Three Years\*

<u>Type of Resource</u>	<u>High Loss (%)</u>	<u>Some Loss (%)</u>	<u>Remained the Same (%)</u>	<u>Some Gain (%)</u>	<u>High Gain (%)</u>
Adequate Income	30.6	40.0	22.4	4.7	2.4
Savings or Emergency Money	40.6	30.6	19.4	7.6	1.8
Medical Insurance	20.4	18.0	51.5	6.0	4.2
Retirement Security	43.0	20.6	24.8	9.7	1.8

\*Gill 2002 (N=176).

In addition to being related to objects resource losses, energies resources are associated with changes in conditions resources. Many of those I interviewed made these connections in their narratives:

You can pin it on [the oil spill] because this is where this comes from. These people are devastated. They can't pay their bills.... Families have left [Cordova] because they don't want to see dad start to cry his eyeballs out and they don't want to see mom yelling at dad because there is no money coming in.

I think [marriages breaking up] had to do with the money crunch. People were used to building nice homes ... and going out spending their winters in Hawaii and they couldn't do that anymore. That was really hard on people.

Maybe some of these people would have gotten divorced anyway, but I don't think they would have done it quite so nastily and just ugly if there hadn't had been such financial strife. You can't tell me that it wouldn't have been easier without that financial strife.

According to Hobfoll (1991), "If resources are used to offset resource loss, and resource loss or threat of loss is the basis of stress, then those who experience loss will become increasingly vulnerable to stress" (p. 189). Income loss spirals experienced by commercial fisherman in the six years following the EVOS were significantly related to anxiety (.27;  $p < .01$ ), depression (.24;  $p < .01$ ), and PTSD (.24;  $p < .01$ ) (Arata et al. 2000).<sup>11</sup> In 2001, retirement savings – classified in the COR model as energies resources – were reported by Alaska Natives and commercial fishermen as being significantly impacted following the EVOS (See Table 6.5). Almost two-thirds (63.6 percent) of respondents indicated "high loss" (43.0 percent) or "some loss" (20.6 percent) in retirement security;

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<sup>11</sup> Loss spirals were operationalized using self-reported income data; fishermen reporting loss of income for at least three of the six years in the aftermath of the EVOS were coded as experiencing an income loss spiral (Arata et al. 2000).

24.8 percent “remained the same” and 11.5 percent reported gains in retirement security (Gill 2002).

Many narratives described losses in retirement savings following the EVOS. In particular, commercial fishermen and their spouses thought of their fishing permits as their “retirement plan,” believing they would be able to sell their permits, boats, and gear and use that money to live on for the duration of their lives. However, as discussed in Chapter I of this dissertation, since the early 1990s limited entry permit values have dropped dramatically in PWS, so that this is no longer a viable option. This is revealed in the following narratives:

The theory was you worked and you had the boat. You didn't have a retirement plan, but you had the boat that was going to be worth money and you had the permit that was going to be worth money and hopefully you put a little money aside. Now having the boat being worth nothing and the permit be worth nothing is a big deal because people don't have the retirement. There are people here that are just working because they can't stop working. That causes depression.

[People thought], 'I'll fish and then when I'm ready to retire, I'll sell my permit and that'll be my retirement.' Now they're saying, 'I have nothing....' What you get is a couple of years of house payments out and that's it. You don't have a retirement.

I should be retired by now. I should be able to retire by now. I spent 33 years fishing and I can't retire.

We thought, '[Our permits] will be our retirement [money].... We will have ... at least some kind of retirement....' Before [the EVOS] we really didn't worry about money because we always knew that it was going to be there and we took it for granted. [After the spill we knew] it wasn't going to be there anymore. Before that we always knew we had a job.

I'm at the retirement age and I don't see myself ever retiring. I will die doing what I am currently doing, simply because I can't afford to do anything else.



Since the oil spill, I know people [who are older than I am] who have used all [their retirement] money up ... [just] to survive, to stay [afloat]. I was just getting to that point to where I could be able to put [money] away and was looking to do it. Now that's gone. Now I'm scraping every year, just to survive the year.... Now, you're scraping from day one [of the season] right to the bitter end to try to make anything out of it.

Loss of retirement savings has influenced Cordova's social structure, as many adults with young children are now in a position of supporting their own parents who can no longer fish, or fish to a limited extent because of their age. The following narrative of a lifetime Cordova resident and commercial fisherman describes this situation:

What really Exxon did is [affect] people my mom and dad's age. Here's my mom and dad, [past retirement age] and no money, none at all to even pay monthly bills. The way the fisheries turned out since the oil spill, the old guys can't even compete with the young guys because there's one piece of pie out there and everybody wants a chunk of it.... When you're in your 70s you don't have the energy to compete with a 30-year-old kid.

A commercial fisherman and mother expressed sadness and loss of time with her young children she had expected to be able to make up for when they were older. An investment she had made in the fisheries – with the hope of being able to return that investment to her children not only financially, but with respect to building for their future relationships as well – does not appear to be likely to pay off as she had anticipated:

I had traded some time away from the kids as youngsters [while I was out fishing] for what I felt would be time with them as teenagers [when they would be able to come fishing with me]. That was so valuable and that it was all possibly disappearing [difficult].... [I saw] the kids in Cordova growing up here and the fabulous experiences they had, and teenagers that usually disappear from the family [instead] spending weeks with their parents out fishing. This is what I wanted.

She was investing in the social capital, as well as the physical and human capital, of Cordova with the belief that ultimately her family would benefit.

Cordovans have also invested considerable time in dealing with litigation processes related to the EVOS. In 2001, 44.3 percent of Alaska Natives and commercial fishermen surveyed indicated they had “spent too much time with lawyers” as a result of EVOS litigation (Gill 2002). This narrative of a commercial fisherman’s spouse speaks to time as a lost resource, as well as to investment without return:

Every time you think you are finished with something [about the litigation] ... there would be something else. You have done all this and what for? To me the most valuable thing a person has is their time. For somebody [Exxon] to use it [that way is not right].... The whole point of [the litigation] I am sure was just to drive everybody crazy so they would give up.

Many narratives about litigation processes highlighted this theme of investment without return or gain:

[Because I am not involved in the litigation] I haven’t had to fill out any paperwork. But my God, people must have to buy a warehouse just to keep track of the paperwork that they have had to fill out endlessly over the years ... to no avail.

I wonder how much paperwork everybody has filled out? How many forms? How many billions have been spent on that alone?

I never really thought we would get any money because when you are fighting the largest corporation in the world, you know, you kind of don’t have a lot of hope of getting anything.... You are filling out all this stuff so you are going to be eligible for this claim which at this point, as far as I can see, we are never going to get.

Even when people were working on spill cleanup activities and gaining financial resources, these may not have outweighed other forms of resource loss. According to the COR model, stress can result when resources are invested without gain or return. After the initial years following the EVOS, the “return on investment” in the cleanup was limited. This exchange between two commercial fishermen I interviewed provided an

interesting narrative about community dynamics in Cordova associated with whether people had worked on the cleanup or not:

R1: [Some people] were extremely wealthy from ... the cleanup and there was a lot of resentment, spillionaires or not. A lot of the people that weren't spillionaires were so self-righteous.... There was a lot of gloom with the people who hadn't made the money, a lot of hype with the people who had. But within two or three years....

R2: Everyone was even again...

R1: You are exactly right. It was turned around and you [were] ... in a better place if you hadn't made any spillionaire money.

R2: Yep.

R1: ...than you were if you would have had it.

Litigation processes associated with the EVOS have further taxed energies resources of Cordovans. Among commercial fishermen, Arata et al. (2000) found significant correlations between involvement in litigation and depression (.18;  $p < .05$ ), as well as litigation and PTSD (.19;  $p < .05$ ). As will be addressed in greater detail later in this chapter (in the section on secondary disasters), ongoing litigation has served as a chronic stressor for many Cordovans. For example, as the spouse of a commercial fisherman commented, "I can't get anything from the attorneys anymore at the post office without actually almost having an anxiety attack. It has gotten to the point where their paperwork is almost as stressful as the actual spill itself was." Quantitative data collected in Cordova 1991 reflects this sentiment, as more than 83 percent of respondents (83.2) agreed with the statement: "The legal issues surrounding the *Exxon Valdez* are as upsetting as the oil spill itself" (Picou and Gill 1995d). Another narrative described the litigation as traumatic for those involved:

The litigation process is where a lot of the trauma is right now. The spill is traumatic. We know that the oil is out there, and we know that it affected the economy, but nobody has paid for it. That is where the post-traumatic type symptoms come into [play].... This isn't our fault. Somebody needs to help us. We are losing our culture, our livelihood, and yet there is nothing. The litigation draws it out and keeps the feelings on the surface. It re-traumatizes folks.

When individual stress becomes shared or collective trauma, as in the aftermath of a technological disaster, social capital is diminished. Using the COR model to examine how objects resources, conditions resources, personal characteristics resources, and energies resources were affected by the EVOS informs how social capital is impacted in the wake of a technological disaster. In particular, this framework provides an opportunity to conceptualize social capital as a condition resource, offering possibilities for researchers to, (a) employ existing COR items in natural and technological disaster research as proxy measures for social capital and/or, (b) to develop social capital items for future use with the COR approach. This line of reasoning is followed throughout the remainder of this chapter.

#### 6.2.5 “Try Forgetting What Five Times Five Is:” Coping Behaviors in the Wake of the EVOS

Social disruption associated with technological disasters involves collective trauma (Erikson 1976a, 1994). As described in Chapter V, the atmosphere in Cordova immediately following the EVOS was chaotic. Confusion, uncertainty, and frustration surrounding events in the days, weeks, and months after the spill generated stress that was manifested in a variety of ways and in myriad settings. The newness of the situation

– characteristic of technological disasters – meant there was no collective definition of the situation, which generated additional stress.

A milieu of collective trauma includes adoption of coping behaviors to mediate stress; some of these behaviors may play a role in diminishing social capital. For example, if avoiding reminders of a traumatic event such as the EVOS is a coping strategy for some individuals, frequency and quality of association with others may decline. According to social capital research, such a decline affects information flow, trust, and norms of reciprocity. Regular informal and formal social interaction is necessary to maintain social capital.

The Impact of Event Scale (Horowitz 1974, 1986; Horowitz et al. 1979), used in studies of Cordova following the EVOS (Gill and Picou 1998; Picou and Gill 1997; Picou et al. 1992), includes items regarding coping behaviors. Of particular interest with respect to social capital are two avoidance coping behavior items: “I stayed away from reminders of it [the spill]” and “I tried not to talk about it [the spill].” As depicted in Table 6.6, avoidance coping behavior trends among Cordovans surveyed beginning in 1989 reveal a persistent trend that continued into 2001 spill (See Table 6.6). More than a decade after the EVOS 26.3 percent of Alaska Natives and commercial fishermen surveyed indicated that they “sometimes” or “often” “stayed away from reminders” of the oil spill. According to the same 2001 surveys, 34.5 percent of respondents “sometimes” or “often” “tried not to talk about” the oil.

Table 6.6 – Impact of Event Scale: Self-Reported Coping Behaviors Following the EVOS

<u>Coping Behavior</u>	<u>1989*</u> % (N=118)	<u>1990*</u> % (N=69)	<u>1991*<sup>◆</sup></u> % (N=228)	<u>1992*<sup>◆</sup></u> % (N=151)	<u>2001<sup>■</sup></u> % (N=176)
I stayed away from reminders of the spill					
Often	8.6	7.2	6.6	9.3	8.8
Sometimes	8.6	15.9	9.3	17.2	17.5
Rarely	19.8	24.6	10.6	11.9	21.1
Not at All	62.9	52.2	73.5	61.6	52.6
I tried not to talk about the spill					
Often	12.8	13.0	7.9	8.6	12.9
Sometimes	18.8	17.4	12.3	14.6	21.6
Rarely	7.7	11.6	9.6	12.6	16.4
Not at All	60.7	58.0	70.2	64.2	49.1

\*Picou and Gill 1995c.

◆Picou and Gill 1995d.

■Gill 2002.

Several narratives commented on avoidance behaviors:

I've got this little sample [of EVOS oil] on my shelf. Every spring the people who go out surveying the beaches always bring me a sample and it just sits over there. I don't think about it a lot. I try not too, purposely. I'm just tired of it. Why am I going to think about it? I've thought about it enough. The more you think about some of these images the more they just get stuck in your mind, harder to get out. The less you think about them, I think the little creases up [in your brain] there actually go away. That's not very scientific but I think if you continue to reinforce it, it's just ... like rote memory. Try forgetting what five times five is. You've said it so many times, you never will [forget].

You can heal when you are in denial I think, because you are just out of your brain and you go on with life like it never existed. There were lots of jokes the next year [after the spill] about denial.... We just denied all the reality of it because we couldn't cope with it. 'Denial is not just a river in Egypt' was a famous one. You would call someone and say, 'How are you doing?' They would say, 'Drifting down denial.' It was real obvious to all of us how protective we were and easy denial was. That was a good, good crutch.

The wife of a commercial fisherman and lifetime resident of Cordova avoided the topic of the EVOS as much as she could:

I never really got into [talking about it much].... It's really hard for me to explain. I didn't call the hotline everyday [to find out what was going on with the litigation]. I felt kind of weird about that or almost guilty like I was ... [trying to] get it out of my mind, so I don't have to think about it and just go on and do my everyday stuff.

One individual who became more actively involved with community issues following the EVOS suggested how avoidance might have been simpler in many cases: "There's a lot of stress involved.... It's a lot easier just to be not involved – 'I don't want to hear about it or know about it. Don't tell me about it. I don't want to look.' I suppose I got a little bit of conscience, but boy I got a lot of stomachache, too."

An Alaska Native and former commercial fisherman attempted to deny his emotions literally for more than a decade, though he indicated they had surfaced in the past couple of years:

As long as you had money to buy your food and to pay your rent ... you could just kind of glide along. Things were going to be alright. There is kind of the pioneer [mentality], the remote Alaskan hunter, fisher kind of mentality. 'I can be stronger than anybody else....' I heard the word denial a lot before but I think that's kind of what it is, in a sense.... You could just keep denying that this was really affecting you, and you really could until a certain point where all of a sudden it gets harder and harder to do that and ... it starts to get to you.

Despite concerted or conscious attempts by Cordovans to move beyond the EVOS, or “forget” about it, the event and the social fallout from it was described to me as being like “white noise” in the background. In sum, a relative newcomer to the community observed:

They may say that they pushed it aside. They may say that they deal with it by working or keeping busy with their families. To some extent they may have, but it is still right on the surface. All you would have to do is go say ‘oil spill,’ and everybody in the room, if you had 50 people in the room, would turn. And the expressions on their faces would change.

Avoiding reminders of the EVOS and its social impacts is challenging in a town the size and location of Cordova. Moreover, many commercial fishermen who spend time on the Sound regularly see places directly impacted by environmental degradation associated with the oil spill. Nonetheless, qualitative and quantitative data suggest many Cordovans cope with spill-related reminders using avoidance strategies.

Generation and maintenance of social capital requires regular communication and association. The “white noise” of events first associated with the oil spill and now related to EVOS litigation – a continuous undercurrent of negativity – permeates the Cordova community. As discussed in Chapter V of this dissertation, EVOS-related meetings in the immediate aftermath of the spill were intensely emotional leading many of those I interviewed to cease attending such gatherings. This avoidance behavior carried over into other social and civic activities, thus reducing opportunities to foster social capital. Moreover, this situation was not conducive to developing consensus about spill-related issues – exacerbating a corrosive community atmosphere. Groups in the community became increasingly polarized, particularly regarding spill cleanup activities resulting in a “haves” and “have nots” situation. Arguably, this may have strengthened *bonding* social



capital in Cordova – for example, among groups with different perspectives about who benefited from the cleanup. However, this type of bonding social capital has not positively affected the community’s ability to come together on issues impacting the town as a whole, thus diminishing *bridging* social capital.

#### 6.2.6 “It’s That Hit That Keeps On Hitting:” Chronic Stress Following the EVOS

Cordovans’ narratives reveal the chronic nature of stress following a technological disaster. As one Alaska Native commercial fisherman commented: “Since day one it has been stressful to this community and it hasn’t quit. It hasn’t stopped.” Virtually all of my interviewees expressed this sentiment at some level, as the following comments indicate:

There are hard times and there are good times in fishing. There is times when we have had money. There are times when I have been rolling my quarters to make my last house payment before the damned season opens up again. You don’t mind the ups and downs of that, but when people start feeling like that everything is stacked against them, and there is no relief, I don’t even know how they could have the heart to fish. That is what is so sad.

If you take the spill, the litigation ... it’s all one continuum and all part of the same process. It’s not been good. Most people can take a hit if it’s defined. Okay, that was the hit. They pick themselves up and start over and ... [do] whatever they have to do. But [the EVOS], it’s that hit that keeps on hitting (*laughing*).... It won’t be ‘after the spill’ until everything is done. As a group we are not going to pick ourselves up and move on until that’s done. I don’t say that with any pride at all.

Arguably, the attentions of Cordovans were so focused on the spill and ensuing litigation that they had fewer resources to invest in the community’s social capital:

[The oil spill] was such a major thing and it involves so many people and it just continues on and on and on.... [With] a divorce you go through a healing or even [when there is] a death in a family ... you go through a

healing process and then you go on with your life. It's such an odd thing because there is no resolution to all of this. Seeing that the corporation part of it can just continue to get away with this is just amazing.... I understand the aspect of appealing to be able to make sure somebody is actually guilty of something that they are found guilty of, but this is more than that. This is the ability of this corporate group to rub everybody's faces in it and so they are still doing that, and that continues to bother you.

As one Alaska Native woman told me, "We are all 14 years older and we have suffered. We are pretty tired. Our brains are thinking all the time. Our emotions are in turmoil all the time." Another woman provided this narrative:

It is just a big fucked up mess. Here are these stinking rotten bastards coming in, fucked up our place where we live, fucked up our way of life, fucked up our economy, fucked up the psychological balance in the town, fucked up the sociological balance in the town, and now they are trying to tell everyone that they have already paid. [They say] 'We have already cleaned it up. These people are just whining.' It makes you just want to go crazy.

An Alaska Native and former commercial fisherman offered this perspective on how the EVOS impacted the Cordova community:

It is difficult to say just how much any given different person is affected by [the oil spill]. You just start dumping those little things on top of them. We all have frustration. You learn to handle a certain amount. Everybody has frustrations so you get along just fine because you can keep [them] in perspective.... [But] if something like the oil spill comes along and just bang ... lays a big rock right on top of you. That can break it open and all of these other frustrations – which are normally under control in your life – will come bubbling out.... If the rock is big enough you can get overwhelmed by it, not just by that big rock, but by all the small ones you have been keeping in perspective, or in control, or whatever you want to call it.... You go along and there are just so many frustrations that people don't normally pay attention to, but we start being overwhelmed by these other ones, then all the small ones start popping their little heads up. Pretty soon you start feeling overwhelmed. You start getting depressed.

Feelings of being “overwhelmed” are not conducive to sustaining or creating social capital. Revisiting the COR model of stress, for Cordovans, dealing with spill-related issues – particularly ongoing litigation – requires continual investment of different types of resources, including objects, personal characteristics, conditions, and energies. Narratives presented in this section particularly describe personal characteristics resources being almost completely tapped – whatever stores of resilience existing prior to the EVOS have been drawn down so that there is little or none to spare. Whatever does exist is likely invested at a personal or family level. Because loss of resources in one area tend to lead to other forms of resource losses, it is reasonable to believe that diminished personal characteristics resources affect social capital as a condition resource.

One stressor that does not appear to have been directly addressed in EVOS literature is Hobfoll’s (1991) “pressure cooker effect.” In some situations, social support interactions increase emotional pressure. It is reasonable to think that because of Cordova’s size, geographic isolation, and the fact that many people cannot afford to leave the town for any length of time because of transportation costs, the entire community might become a “pressure cooker.” Moreover, seasonal residents who left Cordova the winter after the EVOS experienced a different sort of “pressure cooker” atmosphere when they returned in the spring. The following exchange between two of my interviewees revealed aspects of this situation and the pros and cons of living year-round in Cordova especially following the EVOS:

R1: I think the amount of anger that was in people...

R2: Had to go somewhere...

R1: It was related to the spill but ... it had to go somewhere. A lot of it was taken out on each other. If you look back at the fall of '89, you'll see ... the town was so painful. There was so much pain. There was so much anger. There was so much frustration and helplessness. The community was really different in the fall of '89, really different. I remember it as a relief to get out of here. But, I really missed all of the things that were going on. I would read in the paper about the things that were going on, and really felt like I was missing part of the healing because I felt like the groups that they had put together would be helpful. I was out of town and so I couldn't participate. But, for me who always has wanted to stay here in the winter – always – that fall [of '89] I don't recall the desperate wanting to stay because it was such a sad place. People were going through so much emotional stuff that you didn't have that warm close knit community where everybody was nourishing everybody.... That fall was really dramatically different for everyone.

R2: I think you can intellectually say you stepped out of the healing process [by leaving the community] at intervals, but on the other hand was it a healing process here that winter and subsequent winters? For me, it was good to get the hell out and gain some perspective.

R1: [By leaving] we were going through [denial]. We were getting out of here because then we could have at least sometime we could turn it off....

R2: You couldn't ever turn it off.... It might not be fair to characterize winters in Cordova during that critical first couple of years as part of the healing process. It was perpetual wallowing in helplessness and victims, which may not be healthy. To some extent Cordova's failure to bounce back is due to a couple things ... What you might think was healing was actually just rolling around on the ground [as if] we're dead. We're helpless. We can't help ourselves. I don't think that's healthy.

As mentioned in Chapter V, many Cordovans to this day purposefully stay away from spill-related meetings, or other meetings that have the potential to cause tensions to emerge:

[For several years after the EVOS] I just went crazy and got totally obsessed with [the oil spill]. At one point realized something had to give and it was my family and the bitch I had become to live with or it was just to drop everything that had to do with oil and go into denial and go on from there. That's what I did consciously. When we had meetings ... and [someone] came to give an oil presentation, I had to leave. I told [people], 'It's not that I don't value what you are doing. I cannot cope with it. I just

can't. I can't put myself through anymore of this. I value what you are doing, but I can't be involved.... It was an artificial barrier that I put up, and very guarded. [I was] extremely guarded to where if anything came up about it I was out of there like a bolt of lightning just because I knew to be in the frame of mind I wanted to be in to live my life, just don't even say the word 'Exxon.' That went on for a few years, and I am sure I still avoid it. I am aware of my denial, and I don't think a lot of other people are conscious of it.

Situations that might initially have fostered social capital potentially could become settings that generate additional stress for Cordovans. In part, this is reflected in the emergence of a corrosive community, which is discussed following the next section.

#### 6.2.7 "Our Warriors Are Tired:" Summary

Individual stress and collective trauma Cordovans associate with the EVOS have taken a toll on the community since 1989. Initial social and psychological impacts of the spill were certainly challenging enough, but reminders of the spill are everywhere, generating chronic stress manifested at individual, family, and community levels. Those on the proverbial "front lines" of EVOS litigation, as well as those hoping for some sort of resolution, are tiring after 15 years of battles to maintain some semblance of their way of life. The Cordova community started out strong, with considerable resources to deal with a variety of challenges. At this point, however, resources at many levels are tapped as the spouse of a commercial fisherman commented: "I think there was a strength there, but the battle has been going on so long and [some people have] fought on so many different battle fronts [they are] war weary." Depletion of objects resources, coupled with diminished conditions resources, personal characteristics resources, and energies resources has created a complex and socially taxing environment for Cordova residents.

In essence, the community is experiencing a social capital loss spiral much like the economic loss spiral noted by Arata et al (2000). Efforts to survive in the community, to just hold on, are not conducive to building or maintaining social capital. Moreover, efforts to “hang in there” involve avoidance behaviors that have continued to affect social dynamics and diminish social capital in Cordova.

### **6.3 Social Capital and the Corrosive Community**

Social capital is inherent in the technological disaster concept of corrosive community. Empirical evidence suggests a corrosive community – characterized by social disruption, lack of consensus about environmental degradation, and general uncertainty – is more likely to emerge following a technological disaster than a natural disaster (Freudenburg and Jones 1991; Gill 1994; Gill and Picou 1998; Kroll-Smith 1995; Kroll-Smith and Couch 1991b, 1993a, 1993b; Picou, Marshall, and Gill 2004; also see Cuthbertson and Nigg 1987).<sup>12</sup> Recreancy further exacerbates the social environment in a corrosive community because institutions once counted on are no longer trusted. Moreover, people outside a community affected by a technological disaster are not in a position to fully understand trauma and stress associated with the event; thus, they are less able to offer support (Edelstein 1993, 2000).

Social structure is altered in a corrosive community; this affects social capital. Essentially, a corrosive community is a community where social capital is diminished. In part, this is because social disruption in the wake of a technological disaster affects

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<sup>12</sup> Gill (1994) mentions an “abrasive community atmosphere” in his discussion of community segmentation following a technological disaster (p. 222).

associations among individuals and groups. In a corrosive community where interaction is diminished or is negative, opportunities for information flow, consensus building, and development of shared understanding are limited. Interaction facilitates flow of information; without it, there is limited basis for effective collective action. This represents a major challenge in a corrosive community. Furthermore, because there is little or no consensus about the extent and nature of environmental damage following a technological disaster, a social environment of uncertainty and distrust emerges. This setting fosters individual stress and collective trauma, creating additional uncertainty and distrust.

Informal social capital and formal social capital are depleted in a corrosive community. Trust between individuals, as well as abstract trust, is affected by an atmosphere of uncertainty. From this perspective, the relationship between a corrosive community and social capital potentially affects not only individuals, but community effectiveness as a whole.

Quantitative data from the Cordova community provide empirical evidence of a corrosive community following the EVOS (Gill and Picou 1998; Picou and Arata 1997; Picou and Gill 1997; Picou et al. 1992, 2001; Picou, Marshall, and Gill 2004; Picou, Formichella, and Arata forthcoming; also see Impact Assessment, Inc. 1990, 1998; Rodin et al. 1992). Qualitative ethnographic data collected in Cordova by Reynolds (1993) offer further evidence of corrosion. My own interviews reflect how this corrosion was initially manifested in Cordova, as well as in years following the oil spill. Selected narratives from 2002-2003 are presented in the following sections.

6.3.1 “Blackening Going on in the Hearts and Souls of People:” Emergence of a Corrosive Community in the Immediate Aftermath of the EVOS

Gill (1994) contends social “fault lines” and group conflict are present in every community. Prior to the EVOS, conflict groups existed in Cordova generally based on demographics (e.g., race, sex, occupation, age), attitudes (e.g., political), and residential status (e.g., seasonal or year-round) (Gill 1994). This added to the complexity of the social environment associated with the EVOS, as reflected in this narrative:

There is no simple answer how it arrived at this point. There are no simple facts. Like anything, if humans can complicate something they are going to do it. Sometimes you sit here in the middle of the problem, and I call it ‘You can’t see the forest for the trees....’ You lose your perspective because you are in the middle of it.

Marshall, Picou, and Gill (2003) have discerned three primary factors in understanding why corrosive communities emerge: (1) mental and physical health of victims, (2) recreancy, and (3) protracted litigation. Each of these aspects of corrosion was present in narratives of Cordovans in 2002-2003. As introduced in Chapter V of this dissertation, characteristics of a corrosive community and evidence of diminished social capital emerged very quickly following the EVOS. Many narratives described a community in conflict in 1989:

I saw those conflicts on a daily basis. I heard those conflicts. I heard those angry words. They were ugly. They definitely were ugly. Some people would say people were traitors, that they sold out and took one of those contracts. And the media made a lot of that, but that’s their job.

There are still the people that fucked one another over in the name of trying to make that money from Exxon.... Those kinds of rifts probably won’t ever be able to be healed.

There were some big attitudes [during the cleanup]. There was people who were making literally \$4,000 or \$5,000 a day on the oil spill and then there



was people who were fishing. [Some people] believed that fishing was their livelihood and that's what they should be doing for a living.... I guess it depends on how you value a dollar and what kind of person you are deep down inside and whether money makes it tick or love makes you tick or community makes you tick or whatever makes you tick.

It's the money.... Something happened along the way, and that made me sad. All of a sudden what was the attitude ... 'We need to fix this' [became] 'Wow, we are making lots of money....' A warp came in, and that's when I got scared, when I saw that there was some blackening going on in the heart and souls of people. That hurt.

Essentially, there were five categories of people regarding spill related cleanup activities: (1) people who worked on the cleanup; (2) people who worked on wildlife rescue; (3) people who wanted to work on the cleanup but were unable to secure contracts; (4) people who were unable to work on the spill because of family obligations; and (5) people who refused to work on the spill as a matter of conscience. According to those I interviewed, the social disruption that emerged in Cordova was primarily a consequence of the assignment of lucrative cleanup contracts which had a tendency to divide the fishing fleet and the community.

Somehow there were people ... [who] sort of manipulated things.... What was it – Vichy France ... [where] some of the French population co-opted with the Germans, but a lot of them didn't? That was part of the effect, was people realizing that some of the French will deal with the Germans and some of them won't.

There was some real entrepreneurs during the oil spill year that were really, really smart. Maybe they weren't a fisherman but they had access to a boat.... They saw how much money was made and they went and bought another one and had two boats on the oil spill, or maybe three or four. Believe me, there was major money being made. [Some people who didn't fish] all of a sudden ... went from making just a little bit [to a lot of money].... All of a sudden ... just raking in all this money.... [Then others] ... were stuck in the ... 8:00 to 5:00 job making the same amount of money. There was so much money.... Some people had it; some people didn't. There was lots of fights. There was resentment. [There were people] riding in pickups, [taking] extravagant vacations.

The following narratives describe tensions associated with perspectives of these different categories, revealing characteristics of a corrosive community not only within the fishing fleet but also throughout Cordova:

We weren't the ones that went out and made the big bucks. I couldn't go. I was a single parent. I wanted to go, but ... I have no one I can leave [my child] with.... I had to work ... so I couldn't just leave.

[People] were pretty touchy. You had to be really careful. A lot of people got together and helped people out, but you had to be really careful whose side you were on. There was a lot of hard feelings and misunderstandings due to the spill. There was a lot of hardship because there were some people that did well and Exxon paid them well. Then there were some people that didn't get paid at all – they didn't get anything out of it. A lot of people say, 'That it's their fault. If they would have went and asked, they probably could have done better.'

I was [aware of conflicts]. There was people that went out on the cleanup. They took their boats and went because they figured it was a way of making money and providing for their families. Some didn't want to take their boats out on the oil spill because they just felt that ... fishing was their industry and they wanted to remain in the fishing.... I understand that some of them did make some money from it, but it was hard to know what to do. 'Should I go out on the spill ... or do I want to remain on the fishing side?'

I do know a few people that just wouldn't work for [Exxon] no matter what. [One guy] ... just told them to get screwed. He wouldn't work for them no matter what and that was pretty cool that he did that. Mainly the people that got upset about it ... it was just sour grapes, that they weren't on and you were. It created a huge division in the town.

I just tried to kind of stay impartial about it.... I am not here to judge people. You did what you had to do. I say if you made money, 'Good.' I didn't work for them, but I didn't want to. I never wanted to, but I wasn't in a position to anyway. I wouldn't have worked for them.

Analysis of narratives of commercial fishermen who did not work on the spill at all or who worked for a limited period reveal introspection in 2002-2003 regarding their decisions in 1989:

I shouldn't have been so damned proud. I should have got right up here and got on it and made myself \$300,000 instead of \$70,000. I am not knocking the \$70,000. I'm just saying then a person would have more latitude. I don't know if it would all be gone now or not. That would be serious enough money to where you ... would have some choices.

One [of] my closest friends and I got in a fight that summer, an argument because he said that I was doing my family wrong by not working on the oil spill and I should be working on the oil spill.... I said, 'I am doing what I feel is right, and I will live with it.' It took us about four years until we straightened that little conflict out. He was one of my [fishing] partners at the time and it changed things for about three or four years. Since then, we have sat down and straightened our differences out. Come to find out, he was right. At the time I didn't agree with him. And you know what? I don't know if I agree with him now because it would have set me up differently financially, but I still don't think I would ever work for those sons of bitches.

People who did work on the spill cleanup recalled encountering challenges with

Cordovans who did not work on the cleanup:

R: I was sitting down with a friend for lunch. We had just got our lunch and carried our trays up there at the Killer Whale and [a former friend who saw us] got up and left.... It was like we were the whores because we had been working for Exxon, for VECO, on the spill. [This person] got up and left.

I: Prior to that time had you considered yourself friends?

R: Oh yeah. We had worked together ... I definitely knew [this person] and didn't feel we had any problems or antagonisms in our kind of working relationship. It was just a weird thing that happened. [That person] is the only one that actually did that. Everybody else kind of understood [why I worked on the cleanup].

This woman, a non-fisherman, described what she saw after the EVOS and following the cleanup activities:

Money makes people real creepy. There was just a lot of bad blood that was created. There were the people who felt self-righteous because they never got involved. Those people were looking down on the people [who did]. 'Those were the people that work for the oil company. We don't speak to them anymore.'

These previous narratives distinctly highlight a perceived change in the nature of social relationships as a result of the EVOS cleanup, suggesting diminished associations and social capital.

Tension in Cordova was common in the months following the oil spill in 1989 and into the 1990 fishing season:

[It was] pretty tense [that summer]. [There was] a lot of drinking ... a lot of tough, tense times. There was ... a lot of hard feelings about some people having boat contracts to work on the oil spill and other people not having contracts. There were some people that were upset with the people that were working on the oil spill. They said, 'You should be fishing.' There were people that were working on the oil spill that were upset with other folks that didn't work on the spill because they thought they should be trying to make money for their families, easy money for their families, and they weren't. It was a bad time. It was a bad time.

Hard feelings among Cordovans were further exacerbated in the short- and long-term when oil spill cleanup activities created a situation of "haves" and "have-nots." People who worked on the cleanup became "haves;" those who did not work on the cleanup – for whatever reason – became the "have-nots," as these narratives suggest:

There were a lot of 'haves' and 'have-nots....' There were a few people in town that used their ability to communicate to benefit their immediate family, and there really wasn't anything wrong with that per se. The people that didn't work during the spill ... a lot of them felt slighted, especially as time went on, within the next two to three years when they knew that the oil had impacted all of our [fisheries].... Some of the people used the spill as a plus in their lives. They went out and worked on it and put on as much equipment as they could, even though because they had so much on some of their friends weren't able to work. They felt that was ... just the way business is done. There was a lot of hard feelings for a lot of years after the spill ended.

[When] Exxon started throwing the big money around.... There were people out there [working on the cleanup] making big bucks. There were other people that didn't want to have anything to do with it. It created a big division in town – kind of like the 'haves' and the 'have-nots....' It

was about the money. It was about the people who had made the money out there and took advantage of an opportunity.

Distinctions between the “haves” and “have-nots” were based on more than unfounded beliefs about who made money on the cleanup. They were tangibly manifested in the Cordova harbor and out on the fishing grounds as many individuals who financially benefited from their activities invested in new boats, new gear, and new technologies. These visual reminders remain a part of everyday life in Cordova, particularly during fishing season. This was mentioned often in narratives of those who felt as though they were less able to compete:

I had always done real well seining ... even though my boat was ... not too fancy.... But then there were a lot of people who made tremendous amounts of money as a result of the oil spill.... Even though I had been catching more fish than a lot of these guys up until that point, they got big fancy boats. [Now] it is hard for me to compete, seining, with boats that will pack twice as much.... I am trying to get by with the equipment I have had.... Try[ing] to get by with a smaller boat, seining. That is probably the biggest effect. It is hard to compete with those boats.... That is kind of a lasting effect to this day. Not mentioning any names, but there are people who got into big fancy rigs as a result of the spill and they have been able to compete better than they were ever before.

There was a lot of people at that time who really built themselves up from working on the oil spill, stayed on it, and that's where they get the hard feelings. 'Well, you got a brand new gillnetter that you didn't catch the fish to [buy] it with. You worked on the oil spill and that paid for your new gillnetter.' If you were a commercial fisherman, it'd take you five years ... to be able to upgrade from this level of a boat to the next one. They did it in maybe one season jump.

All of a sudden here in 1989, after that season, people ... got 50 footers, they got limit seiners, they got these big boats. They got loans on them. They put a lot of money down. Now they're competing and doing better than me.

Changes in the community's economy and in the commercial fishing fleet following the EVOS – spill-related or otherwise – affected the community's social

structure and social capital; this continues to have ramifications for the town. People who did work on the cleanup and indicated in their interviews that they had successfully saved and managed the money they made during the spill cleanup reflected on the situation in Cordova, again mentioning a distinction between “haves” and “have-nots:”

R: I haven't ever really talked to anybody about this kind of stuff, but thinking about it, one of the things that has been hard on the town is the 'haves' and 'have-nots' of the oil spill. Clearly, I was a 'have.' I guess it all boils down to how you responded to the oil spill and whether you were a 'have' or 'have-not.' If you [were in a position to] ... seize the opportunity [to work and make money] then you were a 'have' and if you [were not, say] ... you were emotionally distraught or dysfunctional because of your emotion, then you may have become a 'have-not.' That was compounded by watching some of your neighbors and friends become somewhat prosperous from it.

I: You said that you hadn't really talked to anybody about it, have you caught any grief from anybody, has anybody said anything to you?

R: No. Everything is said behind my back.

I: Does that bother you?

R: Yeah, sure it does. It bothers anybody to have bad things said about you.

Exacerbation of pre-existing social fault lines were manifested in narratives about seasonal and year-round Cordovans. Although the “insider/outside” situation was not a new one, divisions and animosities resurfaced following the EVOS with an added dimension of not having shared the winter months in Cordova immediately following the summer of 1989. This was disconcerting to some, as described by a commercial fisherman:

Going outside every winter I was fairly devastated emotionally for the first year or two. I would not presume to say that I knew what the people who stayed here that first winter, what they went through. When you show back up the next spring – six months after the fact – and think that you

understand what your friend and cohort and a lot of people I fish around [went through, you're wrong].... If you think you know exactly where he is coming from or what he has been through, [you're wrong].... I thought it was economically driven but the insider/outsider friction kind of started up about the same time again after [the spill].... It was pretty prevalent in the '70s and then sort of went away. This fleet doesn't turn over that often in terms of the fishermen. We tend to love it and stay. I was surprised about that time when the insider/outsider resentment started to resurface again. I always put it [on the oil spill] because there was a pretty good effort to sew up the lucrative spill contracts for insiders.... In any event I think [the problems] might derive from the gulf that opened up between people that went away for the winter and people who had to stay here and live with it all. I really do. I think something happened in [that time frame], meaning that the next spring your friend, your associate shows back up and doesn't understand anymore. You might have been real close the prior fall because you had been through pretty much the same, sharing events. But then all the crap that happened in the winter [and I wasn't] in on it.

If indeed social capital – good relationships with others – is conceived of as a condition resource, it is evident from comments like the previous ones and the following narratives that social capital was diminished in the corrosive aftermath of the EVOS:

There were some hard feelings.... That is another real effect. Everyone remembers who did what during the spill. Everybody kind of knows. They have this mental postulation for who did well on the spill and who didn't do well on the spill and who was able to manipulate things to their best advantage during the spill and who wasn't.... It took a little of the naïveté out of this town. Before that it was based on how many fish you could catch.... It did tear the fabric of this little town to a great degree. It started out where everybody was working together, and then it [changed].

The contract system established by VECO to send people out to work on the oil spill cleanup contributed to animosity among Cordovans, resulting in social disruption and diminished social capital:

People abused some of this stuff Exxon was offering. I know they meant right on some of it, but people abused the system.... Some people ... [were] greedy. I have hard feelings on them. But, I wouldn't have if the oil spill that would have never taken place.

There was a tremendous amount of animosity because some people had jobs and some people didn't have jobs working on the spill. Some people were making a lot of money and there was an incredible amount of nepotism going on ... in town about who was who and who [was in] charge. [It was] not a normal sorting out thing.

There was a lot of people that had two or three boats that were buddies with so-and-so that were all prime members in the CDFU and getting all their buddies jobs. They were saying that ... VECO had the criteria for this one kind of boat. [My husband] could not get on [the cleanup]... They had the VECO offices up there [in the Masonic] and they wouldn't want to talk to you. I got mad one time and I said, 'So in other words if you don't have on cowboy boots and cowboy hat, or you are not friends with somebody that has some power in town you can't work?' My husband is going, 'Shut up honey, shut up.' I was mad. Finally he called his old [buddy that had some connections] ... and he got his boat on.

Like many people I interviewed, one woman, a former commercial fisherman, believed that Exxon intentionally divided the community with how they assigned cleanup contracts:

R: One of the things that upset me the most was the lies that we were told by ... Exxon, then the division it caused in the community, the way that Exxon set us up against each other, [some] boats making more [than others]... That was very sad for me. You never knew what contract you had.... That was one way of splitting [us] up.

I: Do you feel like that was intentional?

R: Yes. I really do feel [it was]. At first I didn't, but I do feel it was intentional because it was very sporadic.... I think they did it on purpose to create tension amongst the rest.... [We realized this] probably about a month later ... when you start seeing some of the handwriting on the wall.

An Alaska Native was specific in his narrative about Exxon's part in the social disruption in Cordova:

[Exxon] knew that if they paid everybody different amounts of money that they would create a lot of discontent, distrust. And it did. It did that for two years, '89 and '90. It worked beautifully. That is probably what caused most of the problems from the spill ... from people not talking to each other later on, with their friends or relatives just because of the



difference in contracts or amount of money. Some came out with maybe only \$175,000 one summer and his friend next door might have \$495,000 for the summer.

A former commercial fisherman who did not work on the cleanup concurred with the previous assessments of Exxon's tactics:

A lot of problems that we have were caused by Exxon. I think it was done on purpose 'cause it didn't make any sense for them to do what their policies were except to divide and conquer. It worked beautifully.... I would say probably at least half of the contracts were make-work. They would go out and anchor in the bay and sit there weeks at a time and do nothing. That was just to buy them off ... [to] get them out of here.... VECO would say, 'Well their contracts were so much per foot' ... but it was never the same amount per foot. You might have two identical boats and give him \$15.00 a foot per day and give this guy \$20.00 a foot per day.... Everybody made different amounts of money, and there is nobody in the world more competitive than commercial fishermen ... nobody.... These people are all getting different amounts of money, and they are friends. They are looking at each other [and asking themselves] ... 'Why is this guy making more than me?' You could get a \$1,000 and the same boat might get \$5,000 a day, and they are sitting anchored at bay doing nothing. Another guy is getting \$1,500 a day or \$1,800 a day, and he is just hauling stuff constantly back and forth everyday. These two are friends – or they might be relatives. It creates a lot of hard feelings whether you like it or not. You are not thinking normal anyway just because of the stress of the situation, and then they just dump these things on top of it. [People] ... take all ... of these frustrations and they just start wanting to be on top of somebody.... In Vietnam they [put it like this]: ... When you are up to your ass in alligators you tend to lose your perspective. That is what happens. You just lose your perspective because you are in the middle of it and all of these things are being piled on top of you. It creates a lot of frustrations.

Although the following narrative of one young woman does not suggest Exxon intentionally divided the community, it does describe a corrosive community atmosphere. She recalls the months after the spill when she was in her late teens:

R: As [someone] who was here and going through it all, there was a lot of jealousy. There was a lot of unfairness on how it was organized.... [Fishermen] are very independent.... They have to run the whole business by themselves. Nobody is going to tell them how to budget. Nobody is

going tell them where to spend their money.... There was a lot of competition of who's going to fish, who's going to clean up, and 'Why did [so-and-so] get on the contract before I got on the contract to get out there? I've been fishing longer, I should be out there.' [There was], a lot of competition of who wants to get out there. Yes, we want to clean it up, but yes, we also want to be fair about it.... How it was being dealt with wasn't very fair and I think it hurt a lot of people.... [The] same size of boat, the same crew that could do the same exact job ... might be getting different amounts [than another boat].

I: Did you get a sense that that was on purpose on the part of VECO?

R: They just didn't have a clue on how to [organize things].... I don't think it was on purpose, but you never know. If this person was more friendly so therefore they got a bigger contract compared to this one who was more stressed out and more sharp with the person, they might have got a lesser contract.... Unless you see the figures and compare apples to apples, you can't really say, 'Why did these guys get more and why did these guys get less?' I think they just weren't organized. They had no clue.

One non-fisherman who was a young man at the time of the spill and did not work on the cleanup offered this perspective:

The guys who were under contract working for Exxon with their boats on the spill basically are Exxon at that point. That is where they are getting paid from, so that is who they are. A lot of these guys that are around here say they hate Exxon or whatever they worked for Exxon when they were cleaning up the spill. Technically, where is the money coming from? It is coming from Exxon. They all became Exxon employees as soon as the spill happened.

### 6.3.2 “[We’re] Trying To ... Put The Pieces Back Together:” Summary

As the previous narratives reveal, there are a variety of perspectives in Cordova regarding EVOS-related cleanup activities and associated decisions. These differing social constructions, though understandable, initially divided the community and continue to influence relationships – social capital – in Cordova. Based on an analysis of narratives presented in my interviews, I would not presently characterize Cordova as an

“actively” corrosive community. I did hear in the narratives *recollections* of a corrosive community and manifestations of consequences of a corrosive community – such as friendships suffering and/or ending. That is, Cordovans recalling the immediate aftermath of the EVOS and their recollections of the early 1990s did describe considerable corrosion – what many referred to as animosity. They indicated, however, that community tensions primarily generated by oil spill cleanup activities and accompanying social and economic issues – the “haves” and the “have-nots,” subsided to a degree once people realized the common foe was Exxon, rather than their neighbors. Since the demise of the herring fisheries in the mid-1990s, the community has experienced an economic downturn, affecting people who made money on the cleanup as well as those who did not. This essentially affects the entire community, however, strong potential exists for the reemergence of corrosive characteristics in the event of a payout of punitive damages.<sup>13</sup> I would refer to what I heard and observed as “reluctant resignation” on the part of Cordovans regarding the fact that there is no closure on the EVOS for them. This reluctant resignation impacts social capital in that there is hopelessness about being able to affect one’s future and thus, there is little point in investing oneself in the community.

The following narrative sums up the situation according to one Cordovan:

[There were] a lot of different division[s] created within the community. It took a really long time for us [to realize it].... The people that worked for Exxon and made all the money, they were trying to paint Exxon into the good guys.... The people that didn’t work for them by choice or whatever [reason], they are saying, ‘Exxon are the bad guys.’ That created a division right there.... As the years went by ... people kind of realized, ‘Maybe Exxon isn’t the good guy.’ It didn’t make any difference whether this guy made a million dollars back then and this guy didn’t make

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<sup>13</sup> This is addressed in more detail later in this chapter, as part of the discussion on the relationship between social capital and secondary disasters.

anything. We are still here together today, broke. [We're] trying to ... put the pieces back together.

#### **6.4 Social Capital, Lifestyle Change, and Lifescape Change Following the EVOS**

Stress, lifestyle change, and lifescape change accompany technological disasters (Edelstein [1988] 2004, 2000). Stress and collective trauma, discussed earlier in this chapter, tend to lead to lifestyle change and lifescape change. As conceptualized by Edelstein ([1988] 2004, 2000), lifestyle change is a disruption in routines or patterns of everyday life. Lifescape change is a disruption of fundamental assumptions about how the world operates. Changes in lifescape result in feelings of isolation, abandonment, health concerns, distrust of others, distrust of the environment, and loss of control (Edelstein [1988] 2004, 2000).<sup>14</sup> In essence, lifestyle change represents coping mechanisms involving the altering of routines or activities to accommodate or respond to a stressful situation or event. Lifescape change represents psychological responses to stress. Whereas lifestyle change accompanies natural and technological disasters, lifescape change is more likely to accompany technological disasters and have enduring qualities.

Stress, lifestyle change, and lifescape change are mutually influential. For example, when individuals and communities change daily routines, such as in the aftermath of the EVOS, lifestyle changes may induce stress and/or they may reduce stress. As a consequence of stress and lifestyle changes, lifescapes are altered – how

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<sup>14</sup> Generally, discussion of lifescape change in technological disaster literature tends to be couched in negative terms; however, there may be some types of lifescape change that are beneficial – such as becoming more environmentally aware.

people fundamentally believe society operates. Lifescape changes may further impact lifestyle, which in turn may affect levels of stress.

From a sociological perspective, in the aftermath of a technological disaster, stress, lifestyle change, and lifescape change not only occur at an individual level; they emerge as collective responses. Put another way, in the context of Cordova following the EVOS, the entire community has been subjected to stress and has undergone lifestyle and lifescape changes. Like other communities impacted by technological disasters, many Cordovans believe that “outsiders just don’t understand” (Edelstein 2000), which contributes to frustration among local residents. This is especially so in Cordova where protracted EVOS-related litigation has offered no immediate resolution for survivors. Specifically, many people outside Cordova do not realize that EVOS litigation is ongoing, and perceptions of many Cordovans I spoke with are that they may be viewed as “whiners” for not just “getting over” the oil spill.

Furthermore, recreancy, discussed throughout Chapter V, contributes to diminished ontological security – confidence in one’s self-identity and in the stability of one’s social and physical surroundings. Beliefs about recreancy translate into concerns about reliability of institutions and changes in lifescape.

I propose that cycles of coping and processes of lifestyle change and lifescape change following the EVOS have influenced Cordova’s social capital, manifested in at least three ways: (1) patterns of association, (2) norms of reciprocity, and (3) maintenance and development of trust. First, lifestyle changes have altered or diminished patterns of association in the community – social networks – which are crucial for maintaining and developing social capital. In the case of Cordova, lifestyle changes were

both short- and long-term (dealing with the immediate spill event and with social and economic changes in the ensuing years). Lifestyle changes affect opportunities for building and maintaining informal social capital and formal social capital. Friendships, exchange relationships, and kinship relationships are examples of informal social capital or trust between individuals. Formal social capital is membership in formal organizations, which suggests “abstract” trust in organizations and social systems (Paxton 1999).

Second, norms of reciprocity intersect with formal and informal social capital, as well as individual and abstract trust. Because there is little or no consensus as to what is taking place following a technological disaster, norms of reciprocity are disrupted. In part, disruption is attributable to lifestyle changes. Norms of specific and generalized reciprocity sustain social connections (formal and informal social capital). Recall that specific reciprocity involves an arrangement in which an individual or group agrees to do something for another individual or group in return for something predetermined. Generalized reciprocity is based on a high level of trust existing in environments where frequent social interaction has laid a foundation for mutual obligation and responsibility for action. Specific and generalized reciprocity decline in an atmosphere of diminished ontological security because they rely on mutual expectations and obligation. Negative effects of such a decline are compounded in situations where trust in others (individual and abstract trust) is lacking, such as in a corrosive community setting.

Third, I propose that lifescape changes among Cordovans have diminished individual and abstract trust, affecting the community as a whole and contributing to a lack of ontological security. I contend that in a community atmosphere of weakened ontological security, development and preservation of social capital are hindered. This

not only has implications for within-community relationships, but also for the ability of Cordova as a community to effectively respond to external threats, issues, or opportunities (e.g. market conditions in the commercial fishing industry).

The following sections present narratives and analysis of lifestyle changes and lifescape changes in Cordova following the EVOS, examining how these affected patterns of association, norms of reciprocity, and maintenance and development of trust.

#### 6.4.1 “People Felt Like They Were Fighting For Their Way Of Life:” Lifestyle

##### Change in Cordova Following the EVOS

As presented in Chapter V and briefly reiterated below, narratives of Cordovans in 2002-2003 describe “initial drastic lifestyle changes” in the immediate aftermath of the EVOS. These were particularly apparent during the spring and summer of 1989.

It really, really disrupted the town incredibly because people felt like they were fighting for their way of life. There were so many different ways that it impacted our town

[There were all] these little pockets of disruption and chaos [in town] that weren't normal.

We were getting phone calls at 1:00 and 2:00 in morning [from] people from the east coast or the midwest forgetting about the time change.... Phone calls would disturb our sleep. Then, of course, sleeping would not even be a consideration after that because we would have been stirred up. There was chaos. There was definitely continued disruption.

It was just real frustrating. You couldn't make dinner arrangements with anybody. You couldn't say, 'We can have our normal Friday night thing' because, who knows? You could have confirmed it Friday morning [and have it fall through].... They are gone [all of a sudden to work on the spill cleanup]. You don't know who you are going to get a hold of. You just hoped to God that someone said 'good-bye' to you.

There was nothing in place; there was no organization. The churches didn't know how to deal with this kind of thing. Nobody knew how to deal with what was going on.

The narrative of a local community leader and long-time Cordova resident provided a compelling account of how the EVOS affected local government. What she described was diminished human capital and social capital:

In the City of Cordova in 1989, government itself stopped – it had to just to meet the demands of the spill. We basically lost one to two years of planning.... [We had] to resurrect government, essentially.... We had 100 percent turnover at City Hall in the three years after the spill. That is virtually unheard of in municipal government.... It was just too hard on the people. They left. When you lose that sort of institutional memory you lose a great deal. We are still putting that back together again.

This previous narrative is indicative of social upheaval that affected not only stress levels, but associations, as well. Routines include patterns of social interaction that were altered for months following the EVOS; this influenced social capital in the Cordova community.

Unlike short-term lifestyle changes following natural disasters, lifestyle changes associated with technological disasters are often ongoing. In part, this is because of secondary disasters accompanying technological disasters which are discussed later in this chapter (e.g., protracted litigation and, as I argue, diminished social capital). Additionally, Cordova's context as an RRC in the aftermath of the EVOS has posed long-term challenges and threats to lifestyles of local residents that continue to broadly affect the community. Although, as discussed in Chapter V, not all lifestyle changes are believed by Cordovans to be a direct result of the EVOS, there are definitely perceived ties articulated by local residents in their narratives. Benchmarking life in Cordova with references to "before the spill" and "after the spill" is one strong indication of these beliefs.



For the most part, narratives about long-term lifestyle changes following the EVOS that emerged during my interviews were associated with changes in commercial fishing. Certainly, changes in the community were more far reaching than that, but this was the focus of the 48 individuals – fishermen as well as non-fishermen – who shared their thoughts with me. In many ways, this further speaks to the importance of commercial fishing in Cordova and its central role in the lifestyle of many local residents. A local businessperson described commercial fishing as “a lifestyle rather than a true business.” In attempting to articulate how the EVOS affected her, a commercial fisherman stated, “They didn’t [just] take my livelihood, they took away my life. I loved fishing.... It wasn’t just what I did to make money.”

As commercial fishermen I interviewed talked about their way of life, several themes emerged. Some represented an almost nostalgic view of fishing. For example, this narrative of a commercial fisherman describes concern about the potential loss of his lifestyle, his respect for others in the fleet, and appreciation of the lifestyle he feels privileged to have lived for more than 25 years:

To me it is an absolute tragedy that this kind of good, clean, honest, direct way of making a living [is being lost].... It has been a privilege, an honor, to fish alongside [people in this fleet].... I have never met any bunch of people in any industry that even come close to comparing to commercial fishermen. This fleet in Cordova ... [is] the only one I have any expertise with, but in general, commercial fishermen are a little like cowboys. There’s a lot of wonderful surprises in terms of their personality and wit and subtly in the way their minds work. They are an extraordinarily able group of people that could be doing lots of other things.

Clearly, for this fisherman, associations he has with other fisherman are valuable, indicating levels of trust and strong relationships integral to social capital.

The narrative of a long-time Cordovan resident who is not a fisherman discussed fishermen and the fishing industry from her perspective:

Cordova's always been an interesting contradiction in terms for most of the fisherman that are here. They're redneck hippies out to make money fishing, but they are making money in an industry that they can feel proud of.... It's very wholesome. It's very organic.... You were out doing things in the clean air. You weren't having to live a regular 8:00 to 5:00 lifestyle.

Generally, narratives of lifestyle emerged at individual, family, and community levels. Interviewees provided narratives about their personal enjoyment of a commercial fishing lifestyle, reflecting how lifestyle and lifescape are intertwined. Because Cordova is an RRC and in the context of the ecological-symbolic perspective, this is understandable. Lifestyles of Cordovans are suggestive of their lifescares. A fisherman recalled when she first became involved with fishing: “[I liked] the fact that I was participating in something, that I was potentially putting food on peoples’ tables.... I was physically doing something myself.” As she and others described being out fishing and why they enjoy what they do, their eyes sparkled:

I just enjoy being out there. It is wonderful to be out there. It is very freeing [even though] it is a lot of hard work. You get that impression you are your own boss.... [It is wonderful] just being out there with the fish and with everybody. It is wonderful.

When you go out there and you come back and you know that you got your product, it's a good feeling. Mother Nature was good to you. [You were out] in the water and the elements.... It's always a good feeling.

It's a way of life for me.... I can't see myself at this point wanting to do anything else even though I feel like I'm getting forced in that direction ... because of the state of the fishery today. But why I love it so much [is that] you get out there and there's nobody telling you what [to do].... When I'm out there fishing basically I'm telling myself what to do and I can work as hard as I want and I get a lot of self enjoyment out of that.... I guess it's my own thing. When you catch fish it's not like a guaranteed, given thing. You can get what out of it what you want out of it. If you want

to work really hard and think like a fish [you can].... It's really satisfying for me.

What was attractive about fishing? That you were running your own business. It was very challenging [at first] because I knew absolutely nothing about it. I didn't come from family that fished, at all. [I enjoyed] just being outside.... I work outdoors, and I really like that.

The spouse of a commercial fisherman commented on a commercial fishing lifestyle and speculated on challenges of changing professions:

It's hard to go to work for somebody else when you've been your own boss. 'I'll go to work today if I want to.' 'I might get up today at 8:00 or I might not.' Just getting in that regiment of having to report to somebody else [would be difficult]. Fishing isn't like that. You are out there 24 hours at a time or more and you don't have to do anything if you don't want to. You can do everything if you want to. It doesn't matter. You can really get the net in the water and fish. Or, you can go out there and lay around. Who's going to know? You're out there all by yourself so it's really hard [sometimes].... In most jobs you have to work with ... other people.

A fisherman in his 70s put it simply: "You feel a lot better when you are out in the water fishing. I know that."

Following the EVOS, lifestyle experiences out in PWS were distinctly different when fishermen went out to work for VECO on the oil spill cleanup. When I asked how her routine in the aftermath of the spill had changed, a commercial fisherman explained:

I wasn't fishing. I was answering to these Exxon guys ... [who were] telling me what to do and where to go.... That was kind of different. Prior to that I had been running my own business.... [I was] in control of my day. I decided when I wanted to get up, where I wanted to go fishing, and once we were on the cleanup, we were just sort of a cog in the wheel. I was just constantly being told [what to do].

Narratives describing times before the EVOS out on the fishing grounds in PWS and the Copper River Flats are replete with elements of social capital, as in this account of an Alaska Native and former commercial fisherman:

I fished all of my life. We traveled to all the villages – the native fisherman all kind of fished together. We had spots where we fished and set up camps where we would have steam baths set up. Those days you could actually kind of all be together alone. You were out on the Sound and there were the boats from [all over].... There was a real kind of a code of how you fished with each other, and how you treated each other, respected each other, and then [after the oil spill] everybody started to change.

Other narratives provide evidence of pre-spill social capital with respect to commercial fishing, as well as comments about how this has changed since the EVOS:

[Before the spill there was] more camaraderie. It was a fun time. There was always good times and bad times, but there was way more good times than there was bad. After the oil spill, that attitude changed. I was having ... more hard times with crewmembers. That was one of my major reasons why I quit seining.

[Before the oil spill fishing] wasn't a rush thing. It was a way of life. People brought their boats out there and anchored them up and they stayed out there for months. We'd stay anchored up, on the closures, up on the grass banks mending nets and maybe having a hot dog roast. [We were just] enjoying life up on the grass banks. [We] did this for *years*. Years and years. It was a real cool way of life. Everybody knew everybody. Everybody respected everybody else's space.... That was pretty much the rule.... It was really cool. It was so laid back. It was a special way of life. And everybody would come to town friends.

Based on these and similar narratives, time once spent developing informal social capital through interactions on the fishing grounds is now limited or no longer available. Moreover, before the EVOS, it was not just fishermen who would spend time out on the fishing grounds – it was entire families, as these narratives reveal:

[Fishermen] would take their families and go on the beach and have a picnic with ... the same person they had just corked.<sup>15</sup>

[Charter planes] used to offer half-priced fares to people that wanted to fly out when they were picking up the fishermen. Families would fly out to

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<sup>15</sup> The term “corked” or “corking” has negative connotations; it refers to setting one’s net in front of another fisherman’s net, effectively intercepting fish. In the old days, floats that held fishing nets in the water were made from real cork, rather than artificial buoyant materials as they are today.

spend the weekend with their families.... Then [they would] fly in as they brought the fishermen back out.

Back then, gillnetting was a lot more relaxed than it is now. We would stay out over closures, and [my husband's] relatives and friends would pull up to the boat and throw me a roast [to cook], then go fish. I would cook and they would pull back up for lunch. We would all tie up together and play cribbage.... Fishing was a much more relaxed thing back then. A while back we had a bunch of people over at the house and we were talking about how much it has changed. You don't do that anymore....[Now] you don't have the privilege of sitting around having lunch with friends when you are out there on the boat.

An Alaska Native woman and former commercial fisherman provided this narrative:

When we were fishing, we'd go out on the sixth of June and we never came back into town until the seventh of August.... [We'd take] steam baths. We would tie seven, eight boats together and everybody would bring up a dish to the beach and just tell fish stories. Men would talk about women; women would talk about men.... That style is gone. We might have a few people tie up together now, but it's nothing like it used to be.

Narratives like the previous ones suggest opportunities to foster social capital have declined in large part because of economic conditions, which threaten the very survival of a commercial fishing lifestyle. As a long-time commercial fisherman surmised, "The fun is taken out of [fishing]. You are trying to catch more fish ... because that's what it going to take for me to survive."

Furthermore, according to many of my interviewees, the nature of competition in the fishing fleet has negatively changed:

It's dog eat dog out there now. The friendship basically stays in town, which is sad. There's so much competition now, 'cause ... there's no prices [for our fish] like it used to be.... It takes a lot more fish now days to make anything, especially with the cost of living [increasing].

[Before the spill] they would be competitive amongst themselves to catch fish. But, it wasn't the same kind of competitiveness that there is now and

has been for quite a few years. They could go out there, and they could harass each other, and set in front of one another, and catch each other's fish – but not get mad.... The competition was a different kind of competition. Now it is a survival competition.... After the oil spill ... the time became limited for the amount of time that they could fish. There were people out there sinking boats. Since then there have been people out on the fishing grounds that have been shooting at each other for corking each other, and ramming each other. That is not something that is a normal fishing thing for this area. [That is] something that has changed.

[Since the oil spill people think], 'I got to get [all the fish] I can. I don't care, ram, jam, whatever.' [I see] that type attitude. The attitude in the fishery completely changed. They go and cork everybody. It doesn't matter who you cork ... your neighbor, your buddy, whatever. It's a cutthroat thing.

It is sad that it has gotten that competitive, but it is just because there is so much on the line. It just costs so much to keep going. My husband is a third generation commercial fisherman here, and last year he was saying, 'I am sick of it.' I have never heard him seriously talk about getting out of it before.

[Before the oil spill] people seemed to enjoy going fishing for the sake of fishing. [It was] not so cutthroat. A few years back ... there was a gentleman that was in trouble [out on the grounds], and he was a local person. It took several calls for people to actually go out and help him because they didn't want to take the chance of getting in trouble [themselves]. It really shocked us.... Many years ago that wouldn't have happened.

Changes in the fishing industry are impacting the lifestyles of older commercial fisherman, as described in the following narrative of a commercial fisherman in his 70s who talks about his perceptions of how fishing has changed:

Years ago ... they had a special place where the old timers used to go fish. It was a nice place to anchor and they could fish there real easy. Nobody bothered them. I figured one of these days when I get that age I will be up there myself. Now I go back and fish there and I have [younger] guys running me out of there.

The previous narrative addresses a change in the norms of reciprocity on the fishing grounds – diminished social capital. A younger fisherman commented on this situation in his interview:

When I first started gillnetting in [the early '70s] you'd go out on the Flats and me, as a young person, watched older people gillnetting. You didn't bother them. You didn't even set [your net] 50 feet or 100 feet from them. You had to set 100 yards away from them or you're corking them.

Explaining some of the challenges associated with possibilities of lifetime commercial fishermen essentially changing careers in their late 40s, 50s, 60s, and even 70s, a long-time Cordova resident told me:

Fishing is just May to September, and they work their tails off and work real, real hard. Then they rest and they play the rest of the winter. They can't do that now and it's really been hard for them to adjust. Many of them don't have skills. They'd gone to high school but they didn't develop anything else. The older people maybe didn't even graduate high school and they only know fishing. That's been their whole life, and [now] you tell them [that] fishing's been taken from them? ... Really good fishing they've dependent on to provide for all their food and meat all winter long is gone. What are they going to do?

Thus, Cordovans who once felt a place in the community, whose experience and skills really meant something, and that they could provide for their families relatively quickly were unable to maintain their situations. This instability does little to enhance their social capital.

Importantly, local residents see not only the lives of their parents and elders changing; they also see the lives of their children and the prospects for them in a new light:

This is going to affect my daughter's lifestyle. I never thought that it was going to affect my daughter's life. It has already ... and it's really going to affect her later. She was excited about becoming a fisherman. She is daddy's little girl. She knows what she wants to do, too. She still wants to

go to school and do something [else] too, but she wants to be fisherman – I never assumed [the oil spill] would affect her.

I told [my sons], ‘Don’t ever buy a boat.’

I am not pushing my boys to be fishermen like I am. I would rather they got an education – more than a high school diploma [like] I did. Fishing is not the same industry as it was the ’70s, ’80s, early ’90s. It is just not the same now.... You can still make a living but we used to make a *good* living. It’s pretty tough to do that now.

The sad thing is I don’t believe that I want my son to be [a fisherman]. I want him to experience this as he is growing up, but I don’t want him to be a commercial fisherman unless something really changes. I hope there is a future. I would love my boy to be able to [fish]. He loves the outdoors.

Fishing, hopefully, will support their college days, but they don’t plan on being fishermen after that. [My son] would love to, but there really isn’t a future in it. There’s not.

These previous narratives represent significant lifestyle changes for the current generation of commercial fishermen, as well as for their children and other young people in the Cordova community. Rather than being able to support themselves through commercial fishing, young people are more likely to go outside Cordova to develop careers and may not find financial opportunities back in the community once they have received a college education or other form of training. On the other hand, it is possible that younger Cordovans may return to the community, bringing with them different forms of human capital that would translate into social capital as well as physical capital. Either way, the community can anticipate lifestyle changes as a consequence of changes in the commercial fishing industry.

Changes in the fishing industry have, according to this narrative and others, impacted lifestyles and social capital, particularly in the commercial fishing fleet:



When things were going well we were a pretty arrogant group. [In the late '80s] we felt like all the rewards that were occurring to us, both spiritual and financial, were just our due. At that time it was a pretty goddamned elite group in this town.... Part of that self-confidence ... was born out of experience. These were people that were used to succeeding. [We] were used to being able to outsmart, outwork, [do] whatever it takes [to succeed].... Even today, in terms of ability, it's an extraordinary group. There's a lot of very smart people are doing this. You know how when smart women make dumb decisions about the men they fall in love with? It's sort of along that [line].... We acknowledge it was a dumb idea, but I'm committed now [to this lifestyle] (*laughing*).

With sadness and resignation, a commercial fisherman summed up the situation from his perspective: "I am sick of this Exxon thing. I am so sick of the politics [in fishing], the price of fish.... That just turned into a nightmare. Fishing is not a way of life anymore. It's not the way it used to be and I know it will never be."

As addressed in Chapter V (narratives of the Cordova atmosphere following the EVOS) and earlier in this chapter (individual stress and collective trauma following the EVOS and Cordova as a corrosive community), lifestyle disruptions in the immediate aftermath of the EVOS were swift and significant. Indeed, a social environment of "chaos" is not conducive to stable lifestyles.

In the short and long-term following the oil spill, subsistence practices – described in Chapter IV – were also interrupted due to ecological damage resulting from the EVOS. To reiterate, subsistence is not simply about eating; it is a way of life, a cultural and symbolic activity. According to quantitative data collected in 2001, 90.6 percent of Alaska Natives and commercial fishermen reported they participated in subsistence activities (Gill 2002). More than one-third (35.1 percent) of survey respondents indicated their "participation in subsistence activities" had "decreased" in the last three years. About one-third (33.6 percent) of respondents reported their "giving of

subsistence to others” had “decreased” in the last three years; 30.8 percent indicated a decline in others bringing subsistence foods to their homes during the same time period. More than half (51.6 percent) reported being unable to obtain certain subsistence foods or resources in the past three years.

Different lifestyle changes local residents view as directly or indirectly related to the EVOS rile many people: “Our whole lives have changed. You’ve got to ask yourself why? Why in the hell should we change? Why should we have to change? That makes you angry.” Moreover, as will be discussed later in this chapter, EVOS-related litigation has further served to disrupt the lifestyles of many Cordovans. The situation has become increasingly difficult over the years as people are asked to quantify their losses for the courts, or the courts attempt to place a value on EVOS-related losses. In sum, as a lifetime Cordovan resident and Alaska Native noted, “What the hell would life have been like if that tanker hadn’t hit that reef? We don’t know. How can they put a value on that?... They took your life away.... How do you know [what that’s worth]? They don’t know. Nobody knows.” Questions like these are intertwined with lifescape changes, which are discussed in the next section.

#### 6.4.2 “I Don’t Even Know Who The Enemy Is Anymore:” Lifescape Change in Cordova Following the EVOS

In 2001, surveys asked Alaska Natives and commercial fishermen questions presented in Table 6.7. These data reflect respondents’ perceptions of their lives before the EVOS (pre-1989), in 1998, and in 2001; they also ask respondents to anticipate what their lives will be like in five years (in 2006) and in the event of a final litigation decision

regarding punitive damages. Each individual was asked to rate their lives on a scale of 0 to 10, where 0 is the worst possible life and 10 is the best possible life. Generally, in 2001, respondents rated their current lives to be about a six (Gill 2002:11). Clearly, perceptions of Cordovans are that the quality of their lives has decreased since the EVOS.

Table 6.7 – 2001 Life Scale Perceptions Among Alaska Natives and Commercial Fishermen\*

<u>Question:</u>	<u>Mean</u>	<u>Standard Deviation</u>
Please answer the following questions using a scale from 0 to 10, where 0 is the worst possible life and 10 is the best possible life:		
Where on this scale do you think you are now?	5.8	2.1
Where on this scale were you before the oil spill?	8.3	1.6
Where on this scale were you three years ago?	5.6	2.0
Where on this scale do you think you will be five years from now?	6.8	2.8
Where do you think you will be after the litigation decision?	8.0	1.7

\*Gill 2002 (N=176).

Notably, respondents' believe their quality of life will improve after the litigation is final, indicating that closure would restore their life scale levels to almost pre-spill levels – regardless of the outcome of the decision. Interestingly, when asked to project future life scale levels (i.e. five years from now or after the litigation decision is rendered), 15 to 20 percent of respondents left these questions unanswered, reflecting

what I would suggest represents considerable uncertainty. At least one individual wrote “dead” beside the question regarding where he/she would be following the litigation decision.<sup>16</sup>

Although data garnered through the life scale survey items reveal perceptions of quality of life and anticipation of changes in quality of life, narratives delve into core beliefs about how Cordovans’ fundamental assumptions about how the world and “the system” work have changed as a consequence of the EVOS. The following exchange between two commercial fishermen exemplifies this:

R1: The confidence in our future was destroyed at that time, [when the oil spill happened].

R2: Sure as hell was.

R1: I don’t think I have ever felt the same about my future in Cordova and fishing as I had prior to [the spill]. It’s like before I thought I had control of things and now I know I don’t. I know that every once in a while I get a phone call and I freak out that it’s another oil spill.... ‘Call CDFU immediately.’ Immediately the fear comes back. [When] somebody calls, there’s certain triggers that go off that even now emotionally trigger another spill.... Just knowing that it’s that close [is difficult].

R1: [It] Brings the horror back every time.

R2: The threat that it just is so close and so imminent. That’s what it feels like to me now. Before I believed that I had control of [things] and now I don’t.

Other narratives spoke to issues of feeling like they had no control over events and situations following the EVOS:

It was just overwhelming amount of stuff to assimilate [after the oil spill]. You just felt so inadequate to be able to do it, like you were just letting yourself down by not. For me, the worst thing was not being in control –

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<sup>16</sup> Life scale data collected from commercial fishermen in 1995 rated their current lives as 3.6 and their life scale prior to the EVOS as 8.8; they projected their 2000 life scale to be 3.3 (Gill 2002:11).

not being able to make our future go this direction with our actions. You just felt so impacted.

I have had a lot of negative things happen to me in my life. That was an individual-based type thing. I didn't feel like the world was out to get me. Since the spill I feel like the world is out to get me. I am sure a lot of [other] people do, too.

We felt like we were forced to do something that we didn't want to do. Somebody else had total control over our lives and told us what to do.

Feelings of loss of control – implying that they were once in control – are characteristic of psychological impacts of technological disasters. Certainly, because of ongoing litigation and associated uncertainty, perceived loss of control is not only about the natural environment; it is also about loss of control over their social environment. Moreover, as with the notion of collective trauma, beliefs about loss of control at an individual level take on new meaning when groups of people – such as in the aftermath of the EVOS – are experiencing generalized loss of control. 2001 quantitative data collected from Alaska Natives and commercial fishermen reveal almost half (44.1 percent) feel loss of control over their lives in the past three years (Gill 2002). Similarly, 38.6 percent of respondents reported feeling less independent in the past three years.

Among those I interviewed, primary themes emerged with respect to diminished ontological security and general trust in others. More specifically, Cordovans expressed loss of trust in big business, as well as loss of faith in the U.S. judicial system and state and federal governments. These narratives and their relationships to social capital are presented in the following sections.

6.4.2.1 *“What It Has Done Is Affected The Way We Are In The World:” Ontological Security Following the EVOS*

The concept of ontological security (Giddens 1990) suggests that stability in social and physical environments lends to individual and group trust and confidence. Conversely, lack of trust or confidence implies diminished ontological security. At the risk of being tautological, in proposing that ontological security is a prerequisite for establishing and nurturing social capital, it logically follows that trust – at micro and macro levels – is also imperative for social capital. Narratives of Cordovans, some of which were presented during my discussion of Cordova as a corrosive community, describe loss of trust within the community following the EVOS. Not only is this loss of trust specific (i.e., in specific persons), it is generalized, as well. As one person stated, “[Before the oil spill,] people were more trusting in many ways.” The spouse of a commercial fisherman articulated it like this: “[My husband] hit the nail on the head. He said, ‘I don’t even know who the enemy is anymore.’” Changes in levels of trust affect micro and macro level associations and overall quality of life, as these narratives suggest:

There has been so much flack from [the oil spill] that people have just become not trusting and not even comfortable with their own families anymore. That makes it really sad.... The quality of living has gone down because people are so fragmented from each other.... [Since the oil spill] you don’t really trust anybody ever again. You don’t trust companies. You don’t trust your government. You just see too many things and then your level of trust is not good.

Everybody is so absorbed in themselves, trying to survive. Where you genuinely care about somebody ... we’ve lost some of that. [There are] trust issues with everybody in the community. That puts everybody into the ... ‘Can I trust him?’ [mode] Can I? I don’t know.

Similarly, an Alaska Native commented:

I am an observer of people. I enjoy people. I like talking to people. I have been in the Sound for a long time and I know a lot of people. I have seen how [the oil spill] has changed everyone.... What it has done is affected the way we are in the world.

To reiterate, changes in lifescape are about perceived changes about “the way we are in the world.” When I asked one long-time Cordovan resident about the greatest impact the spill has had on her life, she replied, “It turned my life upside down and the community’s. I am still a very trusting person, but I am not as trustful as I was before. That is a huge thing to lose.... That was part of the loss with the community.”

In summary, narratives of Cordovans suggest decreased trust and ontological security accompanied events associated with the EVOS. When these are diminished, so is a community’s capacity to maintain ties and norms of reciprocity that foster social capital. Social impacts of the oil spill permeate the community of Cordova. As one community leader assessed the situation, “The spill is part of our daily life – like an uninvited guest. It just doesn’t leave us.... It’s just incorporated into the fabric of our community now.

#### 6.4.2.2 *“Big Business Can Do Whatever They Want, Whenever They Want, To Whomever They Want. Period:” Loss of Trust in Big Business Following the EVOS*

During the interview process I asked participants if their perceptions of big business and government had changed as a result of the EVOS. Most interviewees indicated their confidence in each of these types of institutions had been shaken, if not altogether destroyed since 1989. In some cases, respondents noted that they really hadn’t thought much about having faith or trust in “the system” before the oil spill and

associated events. As the wife of a commercial fisherman stated, “Prior to the oil spill I don’t think that I ever thought about what big companies did or how they worked.”

The narratives of many Cordovans I interviewed indicated the EVOS did change their perspectives on big business and the oil industry:

Big business can do whatever they want, whenever they want, to whomever they want. Period.... I had no reason to think that way before [the oil spill]. What I have witnessed and what I have seen since then there’s [no doubt].... Come on, a blind man can see what’s going on here. We are dealing with the biggest kid on the block with all the money.

Any time there’s any talk of the oil industry there’s some memories [about the EVOS]. There is no trust for the industry – zip. Zip. It is not an attitude that I copped or that I had pre-existing to the spill. It’s a learned mistrust and it’s a warranted mistrust. I actually had kind of a ... good feeling about the oil industry. Prior to the oil spill I hadn’t thought about it too much. Since dealing with them and watching them in action, [I have] no trust, none. There never will be. Trust is for suckers (*laughing*). You don’t have to trust somebody to get along with them or to have a working relationship. In fact, you’re better off if you don’t.... It applies to everything. [Trust] really is for suckers.

I was a little bit naïve about large corporations [before the oil spill]. [The oil spill] has forever altered my perceptions of large corporations and what they are able to do, and how much power they actually wield. [The oil spill] definitely changed that.

I feel like I am more bitter, very untrusting [since the oil spill]. I have absolutely no faith in big oil. I think they are evil. They are evil, manipulative liars and thieves. They have a license to print money.

I have grown to become very bitter about everything and ... hating ... big companies. If you have got a lot of money you can buy off people. You can do what you want, if you got a lot of money.

Quantitative data collected in 1995 from commercial fishermen support narratives of distrust in the oil industry: 91.8 percent of respondents indicated petroleum industry organizations cannot be trusted to respond to another oil spill event (Gill 2002).



Narratives offered by Cordovans reveal feelings of learned helplessness or loss of control associated with anything having to do with corporations – particularly Exxon.

I have gotten a more sour attitude towards big businesses..... Big businesses are more powerful than the little man and they can pretty much do what they want ... for as long as they want.... I have just gotten older and seen more and am more skeptical now than I use to be. I am not so naïve anymore.

I don't think we can conceive of the kind of power that Exxon has when they merged with Mobil. They are a country to themselves.... Their income is bigger than most third world countries. They have a tremendous amount of power.

[Exxon has] all the money. All they have to do is keep everybody starving for all these years.... Their manifest destiny is still alive and kicking. They can go out and do anything in the world and not act responsible for it.

No, I don't have faith in the system. I was part of the system for a while. You can't fight City Hall. You can't even work with City Hall.... I have become somewhat cynical.... [But] even paranoids have real enemies (*laughing*).

Generally, interviewees indicated they believed there was little that they or anyone else could do to lessen the influence and power of the oil industry:

They have got us over the oil barrel, got us by the short hairs. There is no justice because they just get away with it – and they continue to get away with it.... I don't see them getting better.

As you found out [more] about this whole oil spill thing ... it was kind of like the naiveté of everybody [in Cordova] was stripped away.... Exxon doesn't consider itself a citizen of this country. They are an equal to the United States government – that is the way Exxon thinks of themselves.... They are bigger than most governments.

[Exxon is] big business. They don't feel that they are responsible.... Big companies like that should be responsible, but the fact is that they're not.... One person can't change that. That's just the way it is. That's the way they work. That's why they are big companies.

[Exxon is] just bullet proof. What recourse do we have? ... How do you fight a nameless, faceless, megalithic, monolithic corporation? They just

hide behind this person, that person, this lawyer, that lawyer. They have staffs of psychologists and public relations people who are paid to know how people's minds work and what they need to tell them to pacify them, or to divert people's attention.... There is so much subterfuge.... How do you get to them?

Some interviewees discerned between Exxon as an entity or organization and the stockholders or employees of the company:

[Exxon is] bigger than the federal government. In their bigness they are cumbersome, they are ugly, they are stupid. There are many fine people within the oil industry, fine individuals. But [Exxon is] so big.... Definitely [my opinion of all] that has all changed.

I really believe that there are people on that Exxon board that could make a difference with their big hearts, just like mine. I believe that there are people [who would help us], if they would just come here and meet us and listen to what has happened.

I know that there's good people in America. I *know* there is.... There's some people down [in the Lower 48] with some feeling for people ... what the oil spill did or what Exxon did to people in Cordova and in Alaska. If they knew the real story, there would be some heart-broken people that ... own Exxon stock. I'm sure there would be.

Despite comments like those presented in this previous narrative, most people I interviewed expressed a belief that Exxon was concerned only with the proverbial "bottom line" and not about people:

Exxon has played this divide and conquer routine. Their policy is scorch and burn. [They do that] everywhere in the world. Their actions with us, as atrocious as they are and as devastating as their results have been, are not unique.... It's the way the company does business. They are strictly interested in the bottom line. They couldn't give a shit less about the personal factor.

It goes back right [to] the values. Where is Exxon's values in life ... just squashing families. They don't care about little people. They care about money.

Some narratives, such as the following by an Alaska Native, expressed similar sentiments about corporations in general, not just Exxon.

There is no morality [in big corporations]. It is just unbelievable that they can just continue on with this kind of thinking and then wonder why people in the rest of the world don't like them. [And people wonder where] terrorism comes from (*sarcastically*).

One of the biggest threats really to the state and our nation is not so much invasion from other countries, but the ... removal of all our values through faceless multinational corporations. The [oil] industry sucks, it really does.... The stuff is toxic, it's non-renewable, it's vital to our economy, it's part of our national security, and it is in the hands of for-profit, multinational, corporate 'you-know-who's.'

Narratives presented in this section provide an opportunity to learn more about how Cordovans have processed their experiences and beliefs associated with the EVOS and big business – particularly Exxon. Combined with narratives in the following sections regarding beliefs about the U.S. government and judicial system, these comments reveal considerable generalized distrust and disbelief. Social capital cannot flourish in a setting where there are so many feelings of helplessness and distrust, where lifescape has been altered to a point where individuals feels there is little they can do to affect their futures with respect to actions of big business. In sum, a sort of “why bother” attitude existed among many interviewees, specifically based on their personal experiences with Exxon’s handling of the EVOS. Such deeply held beliefs about how society works ultimately diminish personal motivation that collectively drives broader community effectiveness.

6.4.2.3 *“Our Own Government Screwed Us:” Loss of Trust in Government Following the EVOS*

Cordovans I interviewed expressed what many referred to as frustration, anger, or hatred toward government regarding EVOS-related events, particularly believing that the federal government has been more supportive of Exxon than of their own plight. In 2002-2003, the focus of Cordova residents who spoke with me was mainly on the federal government’s failure or inability to administer justice and/or force Exxon to pay punitive damages. This skepticism manifested itself as loss of trust or faith in government – a form of recreancy beyond the oil spill event itself. As one long-time commercial fisherman told me, “It’s just easy to be naïve and think the way your teachers tell you [is the way] it is and all that shit, but it ain’t. It ain’t that way at all.” Quantitative data collected in 1995 from commercial fishermen revealed similar sentiments. Ninety percent believed federal agencies responsible for responding to the EVOS “can’t be trusted” (Gill 2002) Eighty percent (80.2) believed state agencies responsible for responding to the EVOS “can’t be trusted.” Again, this represents loss of abstract trust necessary to maintain and create social capital.

A commercial fisherman explained how her faith in the system had changed since the EVOS: “I know that [the government] is much more corrupt than I thought prior to the spill. I’m sure of that. I’m not nearly as naïve or trusting [anymore].... I’m not the only one. Nobody trusts the federal government anymore. Another woman, a former commercial fisherman, offered the following perspective: “I trusted [the system] more in 1989 than I do now. I have doubt.... Our system is better than most, but it could do with some work.”

According to narratives rendered during my interviews, distrust and diminished faith in government are a direct result of experiences with the EVOS, especially those in conjunction with litigation processes. A commercial fisherman in his late 60s commented: "I'm just getting more and more skeptical of our political leaders.... That may come from my lack of confidence in the court system and the way it's handled this case." A young woman articulated her changed perceptions of the relationship between corporations, government, and the media since the oil spill:

It really changes the way you look at [things]. [You see] how much money [corporations] have, how corrupt they can be, and how ... government really has little power over them. [You see] how they basically run your government, your media.... They are powerful and it is scary.... Money talks.... Yep, that's exactly how it works. They're the big ones, and we're the little ones and what we say, nobody cares. Nobody listens, really.... You really do learn, I guess, how things work.

Generally, Cordovans I interviewed viewed ties between the federal government and corporate interests as troublesome, as presented in these narratives:

If I were to predict America's future I would say if big business continues to rule us politically that ... it is going to tear America down. That is how I feel right now from my anger. I have a lot of doubt about this country and where it is going because of big money interacting with politics.

People [are] skeptical about the ability of government to serve in a full, effective capacity for overseeing industry. It's going to be especially true if we have an administration that is cozying up to oil [companies] and trying to do oil [companies] favors.

It has been a real eye opener to see the control that big business has on our government, on our regulations, on our policies.

[Right now the situation between government and corporations is] 'You scratch my back and I'll scratch yours.' [There is] a little bit too much give and take, too much closeness between those that are supposed to do the governing and [those being governed].

Feelings of being “let down” by the government were described by many Cordovans during their interviews. Thus, norms of generalized reciprocity crucial for sustaining bridging social capital are perceived to have changed. Interviewees expressed feeling abandoned by a system they indicated they once believed in and supported:

[Our government] backs everything else in this world. They back the farmers that are going broke.... How come the ... government doesn't protect its fishermen from low priced fish [like they protect farmers]? Why aren't we getting a billion dollars for our salmon industry every year? ... [I still] have to fish when there are 30-foot swells and it's blowing.... [Farmers] are getting checks all the time from the government to support what they do as a livelihood.... We're farmers, too. We farm the sea. We have the worst disaster our nation has had and [the government] still can't give us any aid. That's the frustration. That's not right and that is why I hate my government. I hate the State of Alaska. They were supposed to give information to us to help defeat Exxon. They never helped anything.... They only did what they had to [for themselves].

[When] your government tells you [things are] alright you've got to believe [them]. Then when they turn around and let you down [like they did with us after the oil spill], you kind of question it. You still question it. And then the way this lawsuit is going you're getting jerked around and [you] wonder how many politicians Exxon's paying off.... Exxon can threaten the federal government [and] get what they want.

I've always been a little bit distrustful of politicians.... [Before the spill, though], I don't think I really grasped the degree to which politics and corporate money and big dollars really do run the government. I wasn't totally naïve to that, but now I've seen the Enron [case], the oil spill. It's hard to say which grain of sand makes the beach.

As they articulated beliefs about the government system, narratives of interviewees commented on lack of accountability on the part of government and Exxon after the EVOS. The narrative of a woman in her mid-50s reveals strong anger and what may be interpreted as expressions of recreancy associated with the EVOS litigation:

The thing that is so frustrating is [that there is] no accountability. They just pass it on to the next CEO in this endless, endless line of black suits, lined up waiting to say whatever they want them [to]. Waiting for the public

relations stuff to spew out of their mouths. I give them credit for that. They are really, really good at it.... It's a shell game. They are really good at razzle-dazzle and bullshit.... That is the thing that just so pisses you off. They are just trying to weasel out of [what they did].... They are just not accepting responsibility, and that is what is so fucking frustrating.

Particularly when Exxon merged with Mobil, Cordovans recalled higher levels of frustration and decreased trust in government:

When Exxon merged with Mobil, it was very frustrating. People had really high hopes that the government would step in and say, 'Exxon needs to settle this lawsuit before we're allowing you to merge.' When that wasn't done, that really brought a lot of people's confidence in the system really far down.

Attempts by one commercial fisherman to describe his anger led him to the following analogy:

I feel like a Palestinian. I think that they have legitimate reasons for being angry. I think [it is] wrong [to try to change things] by killing people, but what avenues do they have? ... Their reactions are frustration. They don't see anything changing without violence.

Finally, one commercial fisherman indicated to me that he was participating in my research with the hope that my work could inform people about what he saw as injustices associated with the EVOS:

I'm hoping that somehow you could get information out to the people in the U.S. about what has gone on here and how people [here] feel. We're part of the U.S. We're part of those same people.... Maybe the government will realize just how much they screwed us. Our government, our own government screwed us and that's why I'm here, [talking with you].

6.4.2.4 “*The Justice System Is Not Necessarily About Justice:*” *Loss of Trust in the U.S.*

*Judicial System Following the EVOS*

Understandably, distinctions between responsibility of the legal system and government for events unfolding surrounding the EVOS were not always discernable in the narratives of interviewees. They recognize there is system of checks and balances but also believe the system has failed in the case of the EVOS:

We are surviving. I think we will survive one way or the other, but I am definitely very bitter and very jaded.... I'd like to think that [our government] will make [Exxon] pay. But when you lose your faith in your government's ability to mete out justice, it is frustrating.

It was horrifying. It was absolutely mind blowing, and I mean that in every sense of the word. These people dumped toxins all over us and laughed at us and they've gotten away with it. Our legal system has allowed them to get away with it. It's not just the legal system; it's the political system. There could be enough pressure brought to bear [to make them pay]. I don't give a rat's ass how big Exxon is, it still depends on other companies and our government to a large extent to do business. Nobody has brought any pressure to bear [on Exxon], as far as I can see.

I would say at least on the civil side of our justice system I am to the point where I think they are just absolutely corrupted.... It's clear to me that should they so choose, Exxon can spend this out in court *forever*. Our grandchildren will be dead before it gets resolved, should they so choose. Without the complicity of the appellate [court] system, it wouldn't be possible.

An Alaska Native described what he saw as the failure of the judicial system in the EVOS case:

Do you know why they have the court system? So I don't get up from the table here and shoot you. We've got to have some kind of common ground and say, 'You have been affected and you need to take care of this person.' That's not happening. These guys [Exxon] are still in business.... The honorable thing to do [would be] to say, 'Okay, we screwed up. Here ya' go. We are taking care of you.' They are not doing, that they don't care to do that.... The more times that they can get away with that, the more secure they feel.... They have been doing this for a long, long time.



Anger and frustration were evident in this narrative of a grandmother:

I don't know how you get to them. But I tell you what, it does make you want to give it all up, get a fucking gun, join some kind of anti-oil society, and go and plot the downfall of Exxon. It is too bad that the 9-11 terrorists didn't drive their fucking plane into an Exxon building. Now that would have been poetic justice. That would have been an act of terrorism I could understand. It does make you want to take the law into your own hands because our legal system is a joke.

A commercial fisherman and Alaska Native was visibly confused, shaking his head when he told me, "Sometimes I look at [our situation with the oil spill] and it looks like a conspiracy.... It just ... doesn't make sense." Similarly, a non-fisherman commented, "You [can] sue someone for spilling hot coffee on your lap in a restaurant, which is absolutely fucking ridiculous as far as I am concerned, and we have jammed our court system with so much bullshit law suits in this country it amazes me." Comparisons between their own legal case and those they see in the media were frequent during my interviews:

It doesn't seem fair.... There's just so much tort law that just seems so ridiculously unfair. How can somebody that's been smoking cigarettes get a billion dollar reward for having lung cancer and yet a court can't see the economic impact that the oil spill has had on us and not give us some compensation. I don't get that. I can't make that connection there.... If we are all going to have to pay into this huge legal system then there should be some kind of standard that works across the board. A smoker who gets lung cancer and gets a billion dollar settlement out of it, what's the difference between that and an asbestos worker? If that woman who spilled coffee in her lap from McDonalds and sued McDonalds for \$4.5 million ... Doesn't [she] know a cup of coffee's hot and what the hell is she doing putting it in between her legs and trying to drive the car for? How the hell is that McDonalds fault? And here [Exxon] put a known drunk on an oil tanker trying to thread his way through icebergs and rocks and mountains on both sides of the boat. [They knew] he was a drunk. He's got a long history of it. It's well documented and [Exxon kept] letting him drive the boat.... It doesn't seem fair and it's not consistent.

Clearly, these previous narratives express decreased confidence in the American judicial system as well as feelings of helplessness and being out of control. Almost 80 percent (79.0) of Alaska Natives and commercial fishermen surveyed in 2001 disagreed with the statement: “The litigation experience has strengthened my faith in the U.S. Court system” (Gill 2002:27). A commercial fisherman in her 50s explained her realization about the judicial system following her experiences with the EVOS:

Court judgments don't necessarily have to do with fairness. They have to do with power. Corporations can get away with a hell of a lot of stuff and don't get reined in. The oil companies are very, very powerful and have lots of friends in Washington.... The justice system is not necessarily about justice. It is about gain and money.

Narratives were replete with comments suggesting reluctant resignation on the part of Cordovans regarding how the courts have handled the EVOS case:

[With what we have been through I] wouldn't put more of a 50/50 chance on anything in a court case. It has made me a little more cynical about whether you can really get justice simply because I am more aware. As much as we have tried to set it up to be a just system .... the justice system is like a lot of things. It is human and it has got ... its foibles. Unfortunately ... it isn't as always as just as I would like it to be.

There is no freaking way that I am going to sit there and [listen to people say] ... it is a fair system for everybody. That's a crock. They cannot prove to me that what has happened with the *Exxon Valdez* has been any bit fair. It has been who has the most money has been able to ward off what is really right. The court system knows it but ... somebody's getting paid off by Exxon to keep this stuff at bay.... I think our system stinks.

[I felt] a slowly eroding belief in the U.S. justice system as I watched the [punitive damages] trial unfold, and as I watched all the aftermath and the motions go back and forth.... The final blow was looking at the decision of the Ninth Circuit Court.

When I asked a commercial fisherman to tell me the greatest impact the spill and the events in the aftermath have had in her life she explained: “[It] completely undermined my sense of trust that the state or the federal government would stand behind me.”

Loss of trust in government as a form of lifescape change was also apparent at a local level. A community leader described effects of the EVOS on faith in Cordova’s municipal system: “[We] tried to resurrect the trust in the people. Their trust in institutions had failed, and [we] just tried to resurrect it.”

Sentiments like those presented in the narratives above demonstrate loss of abstract trust, which is crucial to developing and sustaining social capital. Decreased trust – especially when it occurs beyond an individual level – represents a significant, collective lifescape change. Implications for social capital are apparent when considering generalized loss of trust; without it, social capital is diminished and in some cases lost. Despite – or perhaps because of – feelings of abandonment associated with the EVOS litigation, people remain determined to hang on for as long as possible, as one individual asserted: “[Exxon is] just hoping we’ll go away. The [government] is hoping we’re going to go away. Well, we’re not going away. People are dying, yes. People are going bankrupt, yes, because [our government] won’t back us.”

#### *6.4.2.5 “We Have Been Through A Technological Disaster. We Are Different Than Other Communities:” Explaining Impacts of the EVOS to Outsiders*

For communities that experience a technological disaster, one of the most difficult aspects is trying to explain to those outside the community why the event has had such an impact. Indeed, this is a challenge of disaster research in general. It is my hope that

narratives presented in Chapter IV about Cordova as an RRC, people's ties to the natural environment, and how these ties affect lifestyles have provided a degree of understanding about the Cordova community. However, as one of my interviewees commented: "It is definitely a different lifestyle [here].... No matter how much you record or how much you write ... there is a whole feeling behind [how we live] that I don't think you can give to other people." That "whole feeling" is a lifescape closely linked to lifestyle. Another noted, "Alaska, in general, and Cordova, in particular, are not either one places that you can be very ambivalent about. You either like it and you are here or you don't like it and you are gone." Narratives and discussion in this section attempt to further illuminate why the EVOS has influenced ontological security, lifestyle, and lifescape in Cordova.

Arguably, a common belief that the Cordova community was "different" even prior to the spill contributes to the "outsiders just don't understand" problem (Edelstein 2000). This theme was reflected in narratives of many I interviewed, as they carefully considered my question as to why people outside Cordova might not understand why the impacts of the EVOS were and continue to be so significant for the community:

I would think that the other communities that have been screwed by a technological disaster could understand and no one else can.... If you haven't, you don't [get it]. I don't know how to change that. It's like the difference between ... the people who are there in New York and experienced the [World Trade Center] towers coming down and those of us who saw it from a distance. If you were there, your life is forever changed. If you weren't there, you know that it occurred, but you weren't there. There is a whole different set of emotions, and reactions, and consequences, and memories [that] just isn't happening for you like it is for that person who experienced it first hand. It would be easy for me two years from now to say to a person who has been [in New York] and is still suffering trauma from it, 'Get over it!' They would say, 'You don't understand,' and I wouldn't.

I don't know if you can explain.... Aside from looking at their own bottom line, [trying to put it in financial terms] I don't think they could understand how much grief we feel [about the loss of our lifestyle].... [Prince William Sound] is like a ... heavy glass hand blown bowl.... [It is] utilitarian, beautiful to look at, and it would have lasted indefinitely up until [the oil spill]. Then, because somebody was criminally negligent and smashed it, the pieces are irreparable. You can't put it back together. That's pretty much how much damage has been done. You just can't put the pieces back together.

When you *can* get away from [Cordova], people down [in the Lower 48] don't understand. That first week [when I went outside in the fall of 1989], people didn't understand why I couldn't sleep, why I was constantly crying. It was like, 'What is your problem?' They could not relate to it at all. They could not understand what I was going through at all. They hadn't lived through [it].

An Alaska Native woman explained:

[People] would have to be in our shoes.... They're not. Our lifestyle up here is not the same as down there. This is just a little fishing village compared to modern day freeways, skyscrapers ... what we call the Lower 48 (*laughing*).... I could understand why they don't understand.

The spouse of a commercial fisherman offered this narrative, comparing the effects of the EVOS on Cordova to a situation that someone in Mississippi might better understand:

R: They haven't been here. They haven't been up here to see the beauty and just how much we depend on the ocean for our food.... In Mississippi...what do they grow down there? Cotton?

I: Cotton, soybeans, and there are farm raised catfish.

R: Okay, if the catfish ponds were contaminated, that's their whole livelihood right there. What are they going to do? There's a drought, no rain ... soybeans are gone and there's no cotton....what are you going to do? 'Adjust to it. Get over it.' It's easier said than done.

Similarly, another interviewee used analogies she thought outsiders might be able to relate to:

They weren't here. They don't know.... If they were Microsoft workers it would be like the government saying, 'You can't make software anymore.' Maybe they would get that, 'There's no need for you to come to work today because we've been shut down.' Or maybe [for farmers it would be like someone] ... coming in and saying, 'The environmentalists just won a lawsuit and you can't farm anymore.' Maybe they would understand that. Fishing is a way of life. It's a way of life and there aren't that many places where you can do it. When you take that way of life away, plus you jeopardize the well-being of people in their communities, it's pretty heavy.

A community leader adamantly stated:

People don't understand the stress of a technological disaster. They can't because they haven't been there. They try to equate it, vainly I might add, with natural disasters. That is wrong. They shouldn't do that. The effects of the spill, they're always with us. They are part of the fabric of [the community]. They are just a part of us. I have just now accepted that they are a part of us. The knowledge is in me and nothing is going to make it go away.... We have been through a technological disaster. We are different than other communities.

Generally speaking, the people I interviewed believe for the most part that they've been forgotten by their government and their country. They feel abandoned by "the system" and many expressed a reluctant resignation about their futures:

What I learned is how quickly this kind of thing falls off the national radar screen. It was a big deal and then it was gone. It was like Bill [Clinton] and Monica [Lewinsky]. It was a big freakin' deal and then it was gone. 'It's over. We've got to have fresh [news].'

What happened to us is beyond criminal. It's unimaginable in this country. At least, I feel it should be. I don't feel I'm expendable. I don't think anybody should be.... I don't think that any one entity should be allowed to go in and destroy an area, a town, a group, for their bottom line [like Exxon did].... It's wrong, and nobody has done anything to rectify the situation.

It's a bummer that things aren't the way you would like them to be – the way they ought to be. But you've got to realize that things are how they are and deal with that.

It is what it is. It happened and there isn't a God damned thing I can do about it – and what I am seeing is there is not a God damned thing they are going to do about it. Rather than sit here and blame everything on it and raise my children going, 'If it would have been done this way, we would have had this and we would have had that.' But at the same time, I can also go back there and say, 'If I would have worked on that spill [cleanup], we'd be better off today.' It is what it is. I'm going to get up next May, and I am going to go fishing again and hopefully I have a better season than I had this year. And the year after that I hope I have a better season than that one. My family stays healthy, I stay healthy – who knows maybe in three or four years we will be a lot better off just because I am doing what I am suppose to be doing.

In terms of generating and maintaining social capital, reluctant resignation – a new lifescape for many Cordovans – may be detrimental. If people – especially groups of people – believe there is little or nothing that can be done to affect their futures, then there is little or no reason to invest their own social capital. Learned ambivalence or learned helplessness is not conducive to an environment rich in social capital or any other form of capital, for that matter. If life – particularly in the collective sense – has little meaning, social capital is of little value and will thus be diminished. Conversely, a consequence of reluctant resignation may be that individuals focus on what they perceive they *do* have control over – their families and closer social networks at a micro level. The following narrative by an Alaska Native community leader alludes to this:

I guess we were brought up to the point of saying we need to live life here. We can't be sitting here waiting for Exxon to pay or the weather to get better.... We need to either lower our standards and live life or we need to die.... I want to live instead of spend my time clinging.... We need to make a difference. I don't know if everyone's philosophy is that they need to make a difference in this world. I think they do want to make a difference. They just don't know how to do it. They are making a difference just by being here, but they need to be happy.... You need to be happy with what we have got, the small pleasures in life.... The small things do count.

Certainly, more research is required to explore these issues, but what is clear is that consequences of the EVOS include lifestyle change, lifescape change, and related changes in social capital in Cordova. Again, social stability is necessary for creating and maintaining social capital. Moreover, a social environment of uncertainty, coupled with an uncertain economic environment, is not conducive to ontological security – a prerequisite for social capital and a thriving community.

## **6.5 Social Capital and Secondary Disasters in the Wake of the EVOS**

The concept of secondary disasters – introduced by Erikson (1976a) in his seminal study of the 1972 Buffalo Creek Flood – refers to secondary impacts of technological disasters including relocation of survivors and litigation processes. This section explores secondary disasters in the wake of the EVOS, including litigation and diminished social capital.

### 6.5.1 “An Ongoing Nightmare:” EVOS-Related Litigation As A Secondary Disaster

Among the most commonly researched forms of secondary disaster associated with technological disasters is protracted litigation. There is empirical evidence that ongoing litigation is correlated with chronic stress among individuals and communities involved with litigation processes following a technological disaster (Brown and Mikkelsen [1990] 1997; Gill and Picou 1998; Hirsch 1997; Picou, Marshall, and Gill 2004; Picou and Rosebrook 1993). Moreover, Picou, Marshall, and Gill (2004) contend, “Although many factors have been identified as contributing to the emergence and



persistence of corrosive communities, we contend that none are as debilitating as litigation processes that typically ensue to redress environmental, economic, social, and psychological damages” (p. 1). If indeed this is the case, potential ramifications for Cordova are considerable as 50.0 percent of Cordovans surveyed in 2000 indicated they were involved in litigation associated with the EVOS (Picou et al. 2000).<sup>17</sup> Of Alaska Natives and commercial fishermen surveyed in 2001, 97.0 percent reported involvement in EVOS litigation (Gill 2002). Of those I interviewed, 79 percent (n=38) indicated they were involved with EVOS litigation; those not involved either were ineligible to make a claim, had their claim thrown out, or indicated they chose not to participate in the process.

Almost 15 years after the EVOS, the topic of EVOS-related litigation continues to generate negative feelings and thoughts among Cordovans, ranging from frustration, annoyance, and anger with Exxon, government, and the judicial system to concerns about how a possible payout of punitive damages might affect the community. In 2001, almost 75.8 percent of Alaska Natives and commercial fishermen surveyed “agreed” or “strongly agreed” with the statement “The litigation has caused me to have unpleasant memories of the event” (Gill 2002). Additional perceptions of litigation experiences are presented in Table 6.8. Narratives presented in the following sections demonstrate how social dynamics associated with EVOS litigation processes represent a secondary disaster for the community and, further, how this relates to social capital.

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<sup>17</sup> Involved does not necessarily mean respondents are themselves litigants; they may have family members or other close relationships with individuals who are involved with ongoing litigation.

Table 6.8 – 1995 and 2001 Perceptions of Litigation Experiences Among Alaska Natives and Commercial Fishermen\*

<u>Litigation Experience Statement:</u>	<u>1995 Percent “Yes”</u>	<u>2001 Percent “Agree” or “Strongly Agree”</u>
The litigation has evoked bad memories of the event. ♦	94.2	75.8
I have spent too much time working with lawyers on oil spill litigation.	N/A ■	44.3
The litigation process continues to be a source of stress to me and my family.	N/A	78.9
The litigation has been fair to Exxon.	87.6	59.3
The litigation has lasted too long.	96.7	96.3
	<u>1995* Percent “No”</u>	<u>Percent “Disagree” or “Strongly Disagree”</u>
The litigation has been fair to me.	87.2	71.9
The litigation process has been a positive experience for me.	N/A	75.4
The litigation experience has strengthened my faith in the U.S. Court system.	N/A	79.0

\* Gill 2002.

♦ The 2001 Survey wording of this question was “The litigation has caused me to have unpleasant memories of the event.”

■ Not Asked.

6.5.1.1 *“Now We Are Not Being Traumatized By The Spill, We Are Being Traumatized By The Litigation:” EVOS-Related Litigation Stress*

Almost 80.0 percent (78.9) of Alaska Natives and commercial fishermen surveyed in 2001 agreed with the statement: “The litigation process continues to be a source of stress to me and my family” (Gill 2002). Based on data collected in 1991 and 1992, Picou, Marshall, and Gill (2004), found that involvement in litigation produced stress comparable to original spill-related trauma. More than three-quarters (81.7 percent) of commercial fishermen surveyed in 1995 indicated the EVOS litigation was a stressful to them as the oil spill itself (Gill 2002).

In their narratives, Cordovans I interviewed made distinctions between litigation-related stress and initial stress of the oil spill, noting that a majority of the negative impacts of the spill are now a consequence of the litigation process.

I don't even think about [the oil spill] anymore to tell you the truth. It's kind of like a dull ache in the background. Now we are not being traumatized by the spill, we are being traumatized by the litigation. [That] ... has been traumatic off and on to people, depending on how seriously they took it. Some people took it a lot more seriously than others. I just kind of kept working. I still don't think we are going to get any [money]. There was a point when I thought we were going to get some money but at this point I have no idea.

As discussed in Chapter V, most people I interviewed considered the 1989 disaster preventable – a result of recreant behavior on the part of Exxon, Alyeska, and other organizations. Even more than the initial spill event, many Cordovans consider the ongoing litigation as “preventable.” Most believe that Exxon easily could have chosen to “pay up” and help the community move on; moreover, they contend that the federal

government should have required the company to do something. These sentiments are revealed in these narratives of two Alaska Native commercial fishermen:

We're getting five billion and now they're fighting that? Five billion to Exxon is nothing! They make that in a quarter. If they don't make five billion, they're losing money. Then the Federal government bends over backwards to give them breaks so that say they can survive. It's a joke. Five billion to the people in this community [would mean a lot]. I hope I see it before I die, and be able to set my [kids] up and not have to worry so much about 'em.

Running the tanker on the reef was one thing. Doing what they did after they went on the rocks was criminal. They let that oil go everywhere, and they really didn't give a hoot. They [still] don't give a hoot. That's the way they are. They just plain don't give a hill of beans about anybody but themselves and their bottom line. And that's the way they've been since they started with the oil.... They are not real good neighbors.

This perception – that Exxon exacerbated the situation by its litigation tactics – was common among those who shared their experiences:

It is so stupid because they could have gotten out of here so cheap if they would have made some kind of apology or settlement right a year or two after this thing. They could have gotten out. But, they chose to spend that money... [But] it didn't go to anybody, just back to the scientists, and the federal and state governments, [and the attorneys]. It didn't go to any of the people.

Another individual intimately familiar with the EVOS litigation articulated the situation as follows:

It was told to me that one of [Judge Holland's] colleagues asked him if there had been attempts to settle this thing prior to trial, which is the normal course of events. Settlements are preferred over litigation and usually there will at least be some discussion between the parties regarding a settlement. They may not reach an agreement but at least there are efforts. In this case there were never, ever, any overtures made by Exxon to enter in to any settlement talks with the plaintiffs' attorneys, none. [Apparently] Holland said that, in his memory, it is unprecedented for a case of this magnitude not to have some efforts made to settle.

Cordovans not only blame Exxon for the ongoing litigation, they view the U.S. judicial system and government as partly responsible. Many are baffled as to how the courts can let the litigation go on for so long. Because many Cordovans see the situation in this light, issues of recreancy remain at the fore of their interpretations of the 1989 disaster:

Fuck the big companies of America. I know they make it go around, but I'm held liable. If I go and beach my boat and spill fuel, they're going to be all over my ass. I'll be paying for clean up.... What [is Exxon] paying for? Not a damned thing. [The oil is] still on the ground and still causing problems. It'll be causing problems for who knows how long? They're not being held accountable.... Help the people of the community. They're the ones that are going to have to live with it the rest of their life, not Exxon. Exxon employees, they still get a paycheck every two weeks.

Many of my interviewees commented with disbelief that the EVOS litigation seems so straightforward – a case of “drunk driving,” as one individual put it – and yet other cases, particularly tobacco litigation did not make sense to them. The following narrative epitomizes this type of narrative:

You know all those times in those trials where there are people suing the cigarette companies and people were getting these million dollar judgments because they got lung cancer or their husband died from smoking? They are getting these huge judgments for it, but ... every time [our] case comes up Exxon is basically saying, ‘We didn’t do anything. Nothing is wrong....’ Other people are buying into that. [I am wondering how it is] that someone that *chose* to smoke ... [and] had health consequences [can get] \$6 million to \$12 million dollars.... I am out ... \$800,000 of income for something that ... I was totally not involved in, that someone did to me. [How is it that] I am whining?

Belief that recreancy – though this term is not used by Cordovans – played a significant role in the EVOS disaster diminishes ontological security. As previously discussed, ontological security and a stable lifescape is fundamental to maintaining and fostering social capital.

Overall, after so many years, those I interviewed recognized the determination of Exxon to continue to appeal rulings on punitive damages first awarded in September 1994. As one commercial fisherman recalled, “Exxon told us years ago.... ‘This is a holy war. We are never giving in.’” One narrative recounts a story of an Exxon attorney walking by one of the plaintiffs and his three-year-old son, saying, “Your son will be out of college before you ever see any of this money.” Other narratives spoke to this theme:

Exxon keeps trying to argue in court that they are a wonderful cooperate citizen and that they did all these great things to make things better than ever. They’ve even gone so far as to categorize themselves as beneficent by the fact that this oil spill generated a lot of economic activity in the State of Alaska and what a wonderful thing that was. That just goes to show the corporate arrogance that they have. They are arrogant and they are unyielding.... Exxon’s approach has been from the very beginning basically to wait us out. They’ve got the power, and the attorneys, and the political system on their side.

[Exxon] are just evil bastards. They are evil, evil bastards. They are just biding their time because they have got all the money, and they have got all the lawyers. They can litigate us until the last person that had a settlement is dead and their children have given up in despair and gone off and [started] work in a factory making nuts and bolts or something.

Narrative constructions of the initial event and subsequent litigation processes influence abstract trust among Cordovans with respect to corporations, government, and the judicial system.

Diminished abstract trust translates into diminished social capital. Without trust in “the system,” motivation to support that system declines. Beyond being chronically stressed, many Cordovans have become apathetic about EVOS litigation, an apathy that crosses over into other dealings with government, big business, and the judicial system. Furthermore, as a secondary disaster following the EVOS, protracted litigation encumbers condition resources – especially social capital. The holding pattern of waiting

for a final decision in punitive damages detracts from energies resources, objects resources, and personal characteristics resources, as well.

Cordovans are keenly aware that litigation processes, uncertainty about when the litigation might end, and uncertainty about the ultimate court decision are sources of stress in the community.

[The litigation has been] pretty much an ongoing nightmare because every time you think you are finished with something ... there would be something else. You would put them all back and you would drag them all out again.

We had to go through all this paperwork on our fishing and spill stuff over and over and over again. Every time we would get one [we'd think], 'I can't believe it.' [We'd] dig stuff out of the files and go back to pre-spill fishing records. They were pre-computer too.... This is like going to the storage bin and pulling out [the information].... Every time it is stressful having to deal with that stuff.

Being able to see the end of it and start to heal didn't happen, [especially] with the lawsuit going on as long as it has. It's not just that lawsuit going on, but the questionnaires or the all the paper work that keeps coming at you because then you have to re-dredge up what was going on.... You just have to go through it [again]. Every time you hear from your lawyers you have to dig up all this memory. It's not fun but you have to fill out your papers or you are not going to get your settlement. I know I never checked mine or anything. I just didn't want to deal with it. I don't want to go back there. I don't want to look over that stuff. I don't want to. I just don't want to do any of that.

It's just a continual thing. You're waiting for a judgment, for the court case to finish and ... that's all really stressful.... Everything revolves around Exxon.... Every day they delay just causes more hurt.

Even people not directly involved in the litigation are, to differing degrees, affected by the process. Given the size of Cordova's population, it is safe to say that virtually everyone in the community knows someone who is a litigant; in many cases, that person is likely an immediate or extended family member. Energy dedicated to being

personally involved with the litigation, supporting someone who is, or dealing with underlying litigation-related conflict among family members and friends within the community is energy that is not being put toward maintaining or building social capital. Again, in this sense, loss of social capital is a secondary disaster.

6.5.1.2 *“Animosities Will Resurface:” EVOS Litigation And The Re-Emergence Of A Corrosive Community*

Analysis of narratives regarding EVOS litigation processes since 1989 revealed concern on the part of some Cordovans about potential negative impacts of a payout of punitive damages. Issues associated with filing claims represent one indication of this potential. For example, if an individual’s claims were not accepted in the initial litigation processes, talk about a payout of punitive damages brings resentment. Moreover, if an individual believed he or she should have been included on a claim and were not, community relationships and social capital are affected, fostering the potential for reemergence of a corrosive community as the following narratives reveal:

[My relative] didn’t even include me in any claim.... And [another guy] did the same thing. I just talked to one of his crewmen that [also] qualified in his claim.... He put other people, family on his claim [instead].

[Exxon] should pay. It needs to get over and done with so people can stop complaining about it, quit bickering about it. It pissed me off when I saw people going in and putting in paper work for oil spill compensation when they weren’t here to even work on the oil spill. They weren’t here to help. That made me mad. There is this one guy [I fished with] who is mainly all into getting the money himself and not sharing. He was supposed to put me on that paperwork and he never did.... I don’t think that’s right.... I wish everyone would get paid off and stop bitching and complaining about it.... I’m not one of those greedy people, but it would be nice to have some money.



Some Cordovans were ineligible to make claims from the beginning and realized it. One woman who worked in town, providing community support, was in this position. As she considered her feelings about the situation she said, “So, do I have a problem with somebody that sat there and has dreamt up portions to be in the lawsuit? Yeah, I probably do.” Another young man expressed bitterness:

[Early on] I knew no matter what, I wasn't going to get anything. Period... It has been a hard road ever since. Then listening to people go, 'Oh yeah when those checks come out they are going to get rich.' I just want to punch them in the face.... I hate listening to whiners about it. I really do. I don't stay around them at all. I just walk away. We all had our own different reality of what happened and our hardships that we had because of it in different ways, and it is not going to be financially compensated the same way.

Others did not express resentment, but recognized they would not directly benefit from a payout: “I'm sure that I could have used my imagination and come up with some reason why they should ... hand me a check, but I'm going to be one of the 'I don't gets.' And I'm going to be fine with that.”

As alluded to in previous narratives, possible ramifications of a punitive damages award are seen by some as having strong potential to generate similar corrosive effects as the original cleanup activities. As one Alaska Native put it, “It is going to bring more tragedy if and ever if this thing is ever settled. I foresee even more tragic results.” The narratives of others revealed similar concerns:

As far as the community goes [if we got a payout], I can see just like when the oil spill happened [and] people were making a huge amount of money. Some people are going to get more money. Some people aren't going to get any money. Some people are going to get a little bit of money.... It's going to resurface. I hope it's going to be [okay]. [There are] some hard feelings out there with the community, which is really sad because I don't like to see that.

I think there is a strong potential for a negative impact ... from the payout with ... the difference between who gets what. If the highliner seiner gets three times as much as some other seiner, word will get out and hard feelings come up again. Those kinds of animosities will resurface. I would hope that those won't resurface in a major way ... [but] the pay out certainly has the potential of creating or resurfacing some of those old animosities.

[If we get a payout] it's just going to bring all that right back into play ... especially the way the state of the economy is today.... All of a sudden somebody's going to be driving a new pickup again or going on a Hawaiian vacation or a Mexico vacation. There's going to be suntans.... There's going to be a lot of money. Some people will have it and some people won't. Those feelings will get stirred back up, I can guarantee you.... It comes back down to the obsession of money.

Just like when people worked on the oil spill, [there were] the ones that had jobs, and the ones that didn't work or chose not to work.... [With the litigation there will be] the people that filed claims and the people that chose not to file claims. There is going to be resentment there. There will be problems, I'm sure.

I am just hoping that people find something within themselves to not end up trying to stab each other ... [when a payout happens]. It's understanding human nature to know that that is a possibility.

In summary, as one commercial fisherman told me, "There will always be hard feelings."

Clearly, the potential for a corrosive community to re-emerge as a consequence of a litigation payout is perceived to be strong in Cordova. However, as one Alaska Native optimistically told me:

I think it would be good ... because it will put an end to the whole damned thing.... Any amount of money can't hurt. People need it. It may not be as much as we'd like, but it will put it behind us.... It may help the community, and that would be good.... I don't think anyone's holding their breath. I think we are taking care of ourselves. I think we are going to go out there and turn this thing around. I think we are going to turn this whole dog-gone fishing thing around, but in order to do that we need to have our nose to the grindstone.

Inherently, social disruption accompanying corrosion is detrimental to social capital. Considering Hobfoll's (1988, 1989, 1991) conceptualization of threat of loss as being stressful, the threat of diminished social capital (a condition resource) also has potential to be stressful. Moreover, if people are anticipating community disruption associated with a possible payout, this is likely negatively influencing their interactions with others. Again, this may be conceived of as diminishing social capital.

#### 6.5.1.3 *"It Is Just Still A Big, Gaping Wound:" Ongoing EVOS Litigation*

Most people just want some sort of "closure" on the EVOS litigation, believing that at least then they could "move on" with their lives. During one interview, the wife of a commercial fisherman laughed as she told me, "We have a better chance of winning the lottery than having Exxon ever, ever giving us anything." An Alaska Native commercial fisherman said, "All I can do is hope. 'Expect' [is] a big, big word. I *hope* I get something." Another interviewee summarized the situation like this: "It used to be 'when they pay off.' Now it's 'what if they pay off?'" As a non-litigant put it, "Now there is no closure on it. It is just still a big, gaping wound." Other narratives described a yearning for the litigation to be over:

Just a closure [would be good]. It's something that has been open for so many years... It's almost like if you lost somebody and you never found their body (*laughing*). That's kind of a weird way to put it, but ... [we] just need to close it, whether they don't pay or whether they pay us .... This goes on and on forever. Some people ... [are] so wrapped up in it that it becomes consuming and you can't really grow and move on.

I didn't give a shit about that money [in 1989]. I didn't care then. I don't care now, quite frankly. I would just like the litigation to be over with. I don't want to read about it in the news anymore. I don't want anyone to send me any goddamned letters. The sooner it is over with, the happier I

will be. If they came out tomorrow and said, 'We are going to pay you out,' that would be great. If they came out tomorrow and said, 'You are never going to get a dime, it's over with, and you will never hear from us again,' that would be fine too. I don't expect the money.... I am tired of looking in my mailbox. You got to fill this out again if you want to get this down the line. It just gets tiresome. Even if you don't get anything [from the attorneys] for while you know it's still out there.... It is what it is. I just want it to be over with. I just want to get along. I want my kids to healthy. I want my wife to be happy.

As far as closing the book on the oil spill, I think that when Exxon pays up ... or even if they don't pay, if there is some sort of closure on that [so that] the case is done whether we lost or won ... there will be some closure in that.

How do you compensate somebody for 12 years of loss of their way of life? They don't have enough money to compensate it through that... No amount of money is going to bring back the loss of business. No amount of money is going to bring back the herring fishery. No amount of money is going to help the people that have already lost their livelihood. So much has been lost (*crying*). I don't know that you get that back.... It would help more psychologically than economically because it would be over and done with, and you would have some kind of fucking closure.

A commercial fisherman offered this analysis of how the litigation continues to negatively affect some people in Cordova:

I'm glad I had the attitude that I'm not counting on Exxon. I'm not counting on the settlement money. I think that the people that have continued to get sort of bummed out [are the ones who keep thinking] 'We still haven't gotten our money' and 'When are we going to get our money?' Now it's back to Judge Holland and what's he going to do? They're going to appeal it again .... I can hear people still get stressed out about this, and I feel like I kind of let a lot of that go a long time ago. People who have hung on to that, it hasn't benefited them at all emotionally.

A community leader offered this perspective on the eventuality of a litigation payout for Cordova:

As far as this community, this settlement would have a dramatic impact.... It is my general sense that there are probably a significant number of folks, permit holders here, who are really on the verge of bankruptcy. They are

not making enough anymore from the fisheries during the summers to pay all of their bills. They are getting by and sort of hoping and waiting for this settlement to come and so for them it would mean hopefully being able to pay off all those outstanding bills they have that they have been putting off. Hopefully have something left over to put aside for retirement or do something better with it. It certainly will have a positive impact on the community in terms of feeling like the chapter has been closed. I don't think that the spill, the negative side of the spill will ever be done until there is a settlement. If the settlement comes and there is no payout from it, I would expect that there would be some very hard feelings remaining.

Despite hopes and desires of Cordovans for closure and financial respite, narratives make it clear that no sum of money will *ever* restore the community or their way of life:

[If Exxon pays, it will be like], 'Here's your money' – a slap in the face. They put you through hell and gave you false hopes for all these years and ... it's like throwing money on a bed to a whore. That's pretty much what it comes down to. The amount of money that is going to come from them is nothing

As one young woman summarized the prospect of the litigation being finalized, "People will be happier. Some people maybe will leave. Some people will stay. Some people will probably be snobs about it. Some people will just be happy to get over and done with."

#### 6.5.1.4 "There Comes A Time When You Have To Stop The Bleeding:" Litigation Impact

##### *Summary*

As revealed in the previous narratives, ongoing EVOS litigation represents a significant source of stress and uncertainty for many Cordovans. The wife of a commercial fisherman told me, "Not only did it impact everybody then, it is still impacting everybody." A local businessperson provided this narrative:

There is no doubt in my mind that marriages have dissolved around it. People are broke and they are waiting for that payday. They are waiting

for that spot in the sun. They are waiting for it to all be restored again. I can sense the disappointment coming one way or the other. There [will be] disappointment whether or not it settles or whether or not [people who] are expecting \$10 million to get \$5 million. I expect them to be extraordinarily disappointed. It's awful. People haven't gone on with their lives. They haven't furthered any career or educational opportunities that they could have because why bother by tomorrow they are going to be rich right. In the meantime their houses are falling down, their families are falling apart. It is just tragic.

A former commercial fisherman summed it up as follows:

[The litigation] is like this teasing thing. You kind of get excited that you are going to get back on your feet.... You used to get your hopes up and now they just get dashed. Now you try to settle in because you don't want to get your hopes up again.

As one consequence of ongoing litigation associated with the EVOS, social stability in Cordova has been and continues to be compromised. Because social stability is critical for maintaining and generating social capital, social impacts related to EVOS litigation influence available social capital for Cordovans. Again, when viewed as a form of condition resource, diminished social capital potentially associated with protracted litigation may contribute to other forms of resource loss. Discussion of diminished social capital as a secondary disaster follows.

#### 6.5.2 "There Is So Much Bad Blood And So Much Disillusionment:" Diminished

##### Social Capital As A Secondary Disaster Following The EVOS

As discussed throughout this chapter, diminished social capital in Cordova is related to (1) individual stress and collective trauma, (2) the emergence of a corrosive community, (3) changes in lifestyle and lifescape after the EVOS, and (4) litigation as a secondary disaster. Initial social impacts of the EVOS – particularly with respect to

resource losses discussed earlier – represented significant threats to social capital. I propose that social impacts of secondary disasters further diminish already depleted “stores” of social capital – consistent with Hobfoll’s (1991) concept of income loss spiral. As with initial social and psychological impacts of technological disasters, individual stress, collective trauma, lifestyle change, and lifescape change accompanying disaster-related litigation alter social networks. When social relationships – associations and trust – continue to be affected by secondary disasters, social capital is further diminished. In this sense, ongoing depletion or diminishment of social capital may be considered a secondary disaster. A commercial fisherman described general negativity in Cordova, alluding to a loss of social capital:

There is sort of ... a more pessimistic attitude overall. [It’s] just kind of like ‘Things have gone to hell’ sort of attitude – moreso than I remembered in the past. When something bad happens they always think things are getting worse. They kind of already have the attitude that things are getting worse that when there is an event that something [negative] happens, that just sort of reconfirms their attitudes. That attitude has been a change.

As another long-time resident of Cordova put it, “There is so much bad blood and so much disillusionment, so much frustration that has been created. I don’t know that there is enough money out there to cover any [of those] damages.”

#### *6.5.2.1 “There Was a Lot of Jealousy:” Cordova Community Relations Since the EVOS*

According to quantitative data collected in 2000, 63.9 percent of Cordovans believe the community has become “more fragmented” since the EVOS – a reasonable proxy for diminished social capital (Picou et al. 2001). Perceptions of the effectiveness of local government – also indicative of social capital – are also not positive. Since the

EVOS, 30.2 percent of Cordovans believe the effectiveness of local government has decreased (Picou et al. 2001) To more fully appreciate these data, they should be compared with data from Petersburg, Alaska, the control community for this study (See Tables 6.9 and 6.10).

Concern about further deterioration of relationships in the event of a litigation payout represents a perceived threat to social capital. One interviewee related it to what he saw in 1989 associated with social and economic impacts of 1989 cleanup activities: “At the time there was a lot of jealousy.... [A payout] could cause relationships to [suffer again].” Others anticipate similar impacts: “I expect that we’re going to have some of the same kind of problems here [as we did in 1989 if there’s a payout].... There’ll be some jealousy between the ‘haves’ and the ‘have-nots’.”

Table 6.9 – Perceptions of Cordova Community Relations Since the EVOS\*

<u>Question:</u> In the past 11 years has this community become:	<u>Cordova**</u> (n=155)	<u>Petersburg</u> (n=158)
More fragmented	63.9%	27.8%
Stayed the same	22.6%	63.9%
Closer	13.5%	8.2%

\*Picou et al. 2001.

\*\*p<.001



Table 6.10 – Perceived Effectiveness of Cordova’s Local Government Since the EVOS\*

<u>Question:</u> In the past 11 years has the local government:	<u>Cordova**</u> (n=149)	<u>Petersburg</u> (n=154)
Decreased	30.2%	16.2%
Stayed the same	48.3%	64.9%
Increased	21.5%	18.8%

\*Picou et al. 2001.

\*\*p<.01

Maintenance and generation of social capital require an investment of time on the part of community members – an energies resource in the COR model. If time is being spent on litigation and meeting financial obligations (i.e., working longer hours or taking a second or third job to pay bills), it is reasonable to believe that Cordovans are spending less time engaged in activities that nurture social capital. For example, in 1995, 63.2 percent of commercial fishermen reported they had taken a second job to compensate for EVOS-related income losses; of these, almost one-quarter (24.8 percent) indicated this position was full-time (Picou and Arata 1997). Of those reporting they had taken a second job, more than half (51.2 percent) indicated their second job was not fishing-related. Moreover, about one-third (34.4) of respondents to this survey indicated their spouses had taken a second job to offset financial losses associated with the EVOS. In 2001, 44.3 percent of Alaska Natives and commercial fishermen reported they had “spent too much time with lawyers working on oil spill litigation” (Gill 2002). These

quantitative data are consistent with narratives presented in the previous section on litigation as a secondary disaster.

Continuing this line of thinking, one indicator of social capital cited in research literature is voluntary participation in community, church, and work-based organizations. Engagement of this type is evident in narratives of Cordovans, as well as from my participant observation. Certainly, volunteerism is an important aspect of life in Cordova, as it is in many small communities: “When you want something done, people come out of the woodwork and they do it. There’s a lot of volunteers who are never ever seen.” As described in Chapter IV, there is a strong volunteer base in Cordova. However, several people with whom I spoke informally believed that volunteerism in the community has decreased in recent years. This makes sense, given the economy of the town – if people are struggling financially, they would be less likely to volunteer their time. Moreover, with people taking extra jobs to meet financial commitments, they likely have less time to participate in volunteer activities.<sup>18</sup>

#### 6.5.2.2 *“They Will Close a Chapter of Their Life in Cordova and Go Somewhere Else:”*

##### *Potential Impacts of a Litigation Payout on Cordova*

My research findings indicate a number of families have left the community or spend considerably less time there as a result of economic conditions. As one resident stated, “There has been quite a turnover since the spill. We moved out [for a while].”

Other narratives commented on this, as well:

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<sup>18</sup> Although there is not empirical quantitative evidence to support this hypothesis, this is a line of inquiry worth pursuing in the future through either secondary data analysis or primary data collection.

[The spill] forced a lot of people to leave. That's just the bottom line. You have to be able to pay your bills, and if you can't eventually the bank ... [will] foreclose. You've got at least three families that have left that were born and raised here.... The burden got too big. They had to go. They had to continue to feed their families. I know a couple of people in my generation, the women, would like to stay because Cordova is beautiful. The area itself is very peaceful for the soul. But, because it is so painful for their men to have to try and live here, the men want to leave. They feel like they've failed. They're beating their heads up against the wall trying to make a living, and it's a hard row to hoe.

Look at this town now. We counted up. You've got maybe 10 families who are leaving this town for the winter and [they] might not ever come back. They can't make a living here. It's too hard on them. They're just leaving.

People [are] leaving, finally giving up. There is no hope there anymore that there is going to be that magic check that is going to take them out of that debt.

Little by little everyone is moving away and you see your friends go, you see businesses go, you see and you are still sitting there. You get tired of waiting. You lose hope.

The last five years [have been especially stressful] because so many of our young people have had to leave Cordova.... Cordovans have gotten so beaten down. [The EVOS situation] has taken a lot of the fire out them. They essentially lost a lot of heart. People are tired.

This last comment, in particular, alludes to how chronic uncertainty and diminished social capital have influenced people's decisions about staying in the community.

As of the writing of this dissertation, a payout of punitive damages by Exxon remains *at least* two years in the future. Lines of quantitative research inquiries now pursue possible impacts of settlement money on the Cordova Community (e.g., Gill 2002; Picou et al. 2001). 2000 data indicate a majority of Cordova litigants – 90.7 percent – expect to receive a monetary damage award (Picou et al. 2001; also see Gill 2002). Data collected from Alaska Natives and commercial fishermen in 2001 reveal that 73.5

percent of respondents believe it is “very likely” or “likely” that members of the community will leave Cordova in the event of a litigation payout (Gill 2002) (See Table 6.12). Interestingly, only 13.0 percent of Alaska Natives and commercial fishermen indicated *they* planned to leave Cordova should a payout occur.

Table 6.11 – 2001 Perceptions of Possible Effects of Litigation Payout Among Alaska Natives and Commercial Fishermen\*

<u>Possible Effects of Litigation Payout</u>	<u>Percent</u>
Economic Boom	
Very Likely	24.4
Likely	40.7
Not Likely	34.9
Out-Migration	
Very Likely	21.8
Likely	51.7
Not Likely	26.5
Population Growth	
Very Likely	2.3
Likely	11.1
Not Likely	86.5
Economic Depression	
Very Likely	7.9
Likely	18.3
Not Likely	73.8
No Major Changes	
Very Likely	6.0
Likely	20.5
Not Likely	73.5

\*Gill 2002 (N=176).

On 2001 surveys, Alaska Natives and commercial fishermen were asked to respond to several possible scenarios of Cordova community impacts in the event of a punitive damages payment, presented in Table 6.12. Notably, if a payout occurs, almost two-thirds (65.1 percent) of respondents anticipate an “economic boom” in Cordova. More than one-third (66.7 percent) reported they would “likely” or “very likely” use any EVOS payout monies to pay off debts. About one-half (50.7) reported they would save it for retirement; another 35.4 percent indicated they would make household improvements (See Table 6.12).<sup>19</sup>

Table 6.12 – 2001 Plans for Damage Award Money From Exxon Among Alaska Natives and Commercial Fishermen\*

<u>The following are some possible things a person might do with settlement money:</u>	<u>Percent Indicating “Very Likely”</u>
Leave town/move to a different community	13.0
Invest in a new business	13.0
Pay off debts	66.7
Invest in real estate	20.1
Invest in stocks	19.0
Save it for retirement	50.7
Take a vacation	26.0
Make household improvements	35.4
Invest in commercial fishing	15.2

\*Gill 2002 (N=176).

<sup>19</sup> Percentages do not add to 100 since respondents were asked to mark all that applied.

My qualitative data support findings presented in Table 6.12. In particular, when asked about their expectations for the community in the event of a payout, narratives of many interviewees provided evidence of the belief that there might be a “mass exodus” from Cordova:

I think everybody would pack up and leave because they could afford to go.... There's more families sitting here because they have to sit here. I know everybody says, 'God, if we got that money we could go start someplace else and not have to rely on fishing.' Nobody knows if they can or not, which means the rest of us would probably have to move too unless they came back for the season. Otherwise it would be a little ghost town. When people get their money they are going to leave. They are not going to stay here.... I don't think there will be people actually coming to the community to live.

I believe at this point [a payout] is going to be detrimental. I think we will see a mass exodus out of here, and that's pretty scary.

A lot more people will ... move out of town. A lot of people, including ourselves are stuck, in a way.... You have to have money to leave but you also have to have money to come back to fish in the summer too. More people would be leaving town. There is nothing here. A lot of people are just staying because they feel stuck.

Everybody would pay their bills off and the ones that could afford it would move while they can, while they got the money to do it. There's a lot of people who want to move out of this town, but they can't afford to move and they can't afford to stay. A lot of it would go with people getting out of here.... A month ago we had six families move out. In a town this size, six families is quite a bit at one time.

I would bet that you will see a lot of young families take their money, put it away, and then move out of Cordova because it is so damned expensive to live here. Some of the families that are waiting for the money are not leaving because it is too expensive for them to leave at one time.... If a bunch of money were to come along and drop in everybody's lap, I would say you would see a lot of full ferries pulling out of here.

[With the] state of the fisheries ... I think that a lot of people will just leave. They'll not only close the chapter on the Exxon oil spill, but they will close a chapter of their life in Cordova and go somewhere else. I think that will happen.

Even if social disruption associated with people leaving the community is not long-term, it does affect social structure by causing a “shock wave” as described by this woman:

In the long run [a payout] is not going to make a lot of difference. Certainly there will be some people that will leave and some people that may move here, but that happens all the time anyway. There are people now that would have probably already left if they could have afforded to leave. So there were people ... that maybe left that would have liked to have stayed here that could afford to come back.... Other than the initial shock wave, and people being upset because people that have regular jobs are being out spent by all these people that all of a sudden have a bunch of money.... There would be resentments or inequalities in the beginning [but it] will go back to where it was.

The narrative of one commercial fisherman who no longer lives in Cordova provided another perspective on challenges of people leaving the community:

I am trying to rekindle all ties that I have with here.... It wasn't so bad until I ... had to sell my place [here], 'cause then I broke all ties, pretty much.... People resented that I wasn't staying here and helping the community. That's my feeling. That's the feeling I got. I'm going around and trying to just reunite myself with the people I knew.... [I want to] get that community feeling back that I've lost for so long. I lost that.... Nobody [outside Cordova] understands ... commercial fishing.... They don't know how I feel because they've never experienced it. They've never seen it. And so, you have nobody to talk to that understands you or your feelings. They can't even come close to thinking how you feel. And so, I just kind of gave up.

Coleman's (1990) comments regarding public-good aspects of social capital address issues of families moving away from a community to pursue job opportunities. As he notes, “Because social capital consists of relations among persons, others may experience extensive losses due to the severance of relations with members of that family, a severance over which they had no control” (Coleman 1990:316). For Cordovans, this “severance” might represent another circumstance over which they hold

no control. Extending the line of thinking regarding potential impacts of residents moving from Cordova, consider people leaving the community as a *threat* of loss of social capital (as in the COR model). Once again, according to the COR approach, stress ensues not only when resources are lost, but when there is a *threat* of loss. Furthermore, if people are considering moving from Cordova, it is possible that they are making fewer investments in the community. That is, just as people would likely stop making financial investments in a community they intended to leave, they might feel there is little value in investing social capital in a place they do not intend to remain. Similarly, if Cordovans believe their friends or neighbors might leave the community, they might invest less of their personal and social time with them. The potential effects of this should not be underestimated, especially if the threat of loss is drawn out over an extended period of time – such as in Cordova where people have been waiting for more than a decade and there is no end in sight for a final ruling on punitive damages.

Finally, the notion that “outsiders just don’t understand” (Edelstein 2000) is challenging for the Cordova community when newcomers move there. Because they did not directly experience the EVOS, newcomers may be unable to relate to those who lived through it. This – like divisions between seasonal and year-round residents – presents a situation that must be negotiated by community members.

Each time a family or individual moves away, even if that family or individual is “replaced” by another, social capital (as well as human capital) is at least temporarily diminished:

Some of the people that leave could be those who could help the town recover.... Whenever you lose people it does hurt a community.... Some people who leave [are those] who are not afraid to go out, and carry on,



and do things. Those are the kind of people that you would like to keep because they can help the town survive.

Protracted litigation following the EVOS represents a secondary disaster in that it generates individual and collective stress among Cordovans. Similarly, diminished social capital represents a secondary disaster that affects Cordova as a whole. It is conceivable that without ongoing litigation, social capital in Cordova would be less depleted. That is, had litigation been resolved earlier, stocks of social capital would not have been drawn down to the extent described in narratives of Cordovans. Social capital is an important condition resource, critical to community effectiveness just as self-esteem, self-confidence and sense of mastery are essential for individual motivation.

In the sense that loss of social capital not only affects those who were living in Cordova at the time of the EVOS, but newcomers, as well, it is perhaps an even more pervasive and subtle secondary disaster than ongoing litigation. Impacts of continual litigation on Cordovans are comparatively apparent – people are living in limbo. On the other hand, impacts of diminished social capital are less easy to articulate.

Greater understanding of influences of diminished social capital as a secondary disaster may be forthcoming: If litigation is primarily responsible for loss of social capital, then settlement should ameliorate or resolve loss of social capital as a secondary disaster. I contend that replenishment of energies and objects resources will not necessarily translate to replenished social capital as a conditions resource – at least not in the short run. It may actually further diminished social capital in the immediate turn. With this said, most Cordovans believe payment of punitive damages is necessary for the long-term economic survival of the community.

## 6.6 “We Wouldn’t Be Discussing These Things If Exxon Hadn’t Spilled The Oil:” Conclusion

In the strictest sense of scientific inquiry there were no baseline data on social capital in Cordova. Qualitative data – and to some extent, quantitative data – presented in this dissertation have relied on recollections of Cordovans, requiring them to draw from memories of events long passed. Indeed, this is a challenge of my research, but it is the “current realities” with which I am most concerned – how interviewees have come to interpret impacts of the EVOS on their lives and the community. However, in my research journey I did come across a qualitative baseline of social capital in Cordova prior to March 24, 1989. In “‘Our Way of Life is Threatened and Nobody Gives a Damn:’ The Cordova District Fisheries Union and the Trans-Alaska Pipeline,” Payne (1985) discusses the battle of commercial fishermen and others to keep the Trans-Alaska Pipeline from terminating in Valdez. Payne (1985) asks this question: “How is it that a few fishermen in a small Alaskan coastal community elected to confront such formidable opponents as the United States Government, the State of Alaska, and a collection of multi-national oil companies? Where did these individuals get the nerve for the undertaking?” Of greatest importance to the work presented in this dissertation, Payne (1985) asserts “the nerve” came from “the social fabric of the community” (p. 78). He offers the following eloquent description of Cordova’s social fabric more than four years prior to the EVOS:

Here were men who worked together and lived in the same community. Their wives and children shared this life as well. They knew each other from school, from shopping, and from civic endeavors.

Life in a small town like Cordova promotes a more personal sense of cooperation and familiarity than exists in larger communities. For example, your next door neighbor may be on the City Council, may fish for the same cannery you do, and you probably 'run into' him or her several times in the normal course of a week's activity. Thus Cordova is more of a 'face to face' community than an impersonal bureaucratic one.

The physical location adds to the social cohesion. Cordova is accessible only by air or sea. As a community Cordovans have learned to address their needs through their own local resources. Thus volunteerism, innovation, civic participation, and community interests are necessary and real aspects of life in the town. This community integration promotes familiarity and trust between residents.

So when faced by a decision, many individuals are involved. When trying to decide what to do about the pipeline issue, actions chosen by the fishermen were supported by the wider base of families and community. If one looked, for example, at the time between when [one individual] initially got aroused over the issue and when political decisions were made, it appears to be a very short period to choose such a momentous undertaking. But the existing community cohesiveness, history of cooperative action, and strong trust in the leadership permitted rapid action. Cordova is a tight community where "everyone knows everyone else" and consensus can be reached quickly by using that familiarity.

The nature of the fishing enterprise in the Cordova area also promotes a cooperative spirit. Even though fishing is essentially a competitive enterprise (there are only so many fish to be caught and the person who catches the most makes the most money), at the same time it must be characterized by cooperation.

The most telling demonstrations of this inevitable mutual dependence revolves around the dangers of the enterprise. Fishing is a dangerous and complex business involving a great deal of machinery. It is performed in an environment that can often be threatening. Because of this, fishermen must rely on one another, based on the simple principle that next time you might be the one in trouble. Too many things can go wrong and there are too many unpredictable conditions to assume you will not one day need assistance. So, despite the inherent competitive nature of fishing, it is offset by a very real need for cooperation.

But cooperation also is found outside of situations of danger and stress. Resources are often shared and people work together in the harbor and at sea. Of course, on a large vessel, such as a seiner, strict cooperation is required to avoid injury from complex machinery and to catch as many

fish as possible. Yet at another level there are informal work groups composed of several fishermen who are friends and who assist each other in town and elsewhere. And finally there is the union. So it should not be surprising that cooperation easily is extended to political issues such as the terminal fight. (Payne 1985:78-9)

This account – again, written before the EVOS – about *unsuccessful* attempts to keep the pipeline from terminating at Valdez speaks volumes about social capital in Cordova. Payne's (1985) description supports perceptions of Cordovans I interviewed that the community did, at one time, have considerable energy, drive, and motivation (i.e., ability to engage in sustained collective action) to take on big oil and government. This begs the question: How was the oil spill different from other challenges Cordova has faced?

Individual and collective responses to stress following technological disasters influence social capital in a community. Lifestyle changes, lifescape changes, and characteristics of a corrosive community disrupt social dynamics at micro, meso, and macro levels (Freudenburg and Jones 1991; Edelstein 1993, 2000). Disruption of social dynamics, which are linked to social structure, hinders opportunities to generate and foster social capital. For example, when social interaction is not positive (as in a corrosive community setting) or is decreased (as a consequence of lifestyle changes following a technological disaster), opportunities to develop trust and engage in norms of reciprocity are diminished. This may generate additional stress, further impeding positive social interactions. Lifescape changes may include changes in abstract trust and beliefs about generalized reciprocity, potentially affecting beliefs about an individual's or group's ability to affect their futures.

The narratives of Cordovans I interviewed describe diminished social capital that in their perception continues to impact the community to this day:

I think it's fair to say that the spill initiated a wave of pessimism in this town that still hasn't crested and broke. Honest to God, we went from a town and a fleet whether we were 100 percent local or not, that thought any problem could be surmounted. We had a lot of faith in ourselves.... [We had] the attitude of, 'Okay we are going to do our best to cope with this mess that you [Exxon] have created, and after that we are going to come after heavy penalty, financial penalty.' Our pessimism and lack of self confidence [did not used to exist].... This town is not the town it was, not just financially and socially, but our willingness to tackle something [has changed]. It finally dawned on us that we could very well fail and be all tangled up in bureaucracy and red tape and details and expend our energy and accomplishments. The willingness to put on your suit of armor and saddle up the mule and go after them has been steadily diminishing. People are more and more passive on all fronts – not just [with] Exxon, but the problems within the fishing industry, you name it. It's not fair to lay all of that on the spill. If you're honest with yourself, you can't lay all of it on the spill. [But] there's a lot of processes that were set in motion by [the spill]. We weren't omnipotent. We were confident, and then it all came [to an end].... [We went] from 'We can fix anything' to 'I don't think we can fix anything.' It's gone 180 degrees.

This town here was a thriving little community. People had good attitudes. People wanted to stay. There were always those people that came and went, but there was always a group that was going to stay. There was a future here.... The reason we thought we could make it through the winter was because we had hope.... Now we've been going through this struggle [with Exxon and] it's just like a whole domino effect. Since that day [of the oil spill] it seems like every day a little piece of this town dies. In the form of fish prices, in the form of people leaving.... in all different sorts of ways. It affected everything. I would guess you would almost think of it like a cancer.... It just started eating away at this little community and it pretty much devastated everything. We're just treading water here.... We're hoping that something will change.

The first victim [of the spill] that I saw was truth, and honesty, and integrity because people who I would have previously thought had integrity ... had none.

There has just been total bad vibes ever since [the oil spill] in this community. There ain't the happy [people anymore].

And yet, there remains a spark of hope for the community among those I interviewed:

So much has already been lost. We will never ever be able to get back what was lost, never. Not environmentally and not economically – maybe sociologically, as the mindset comes around that we are still all in it together and that Exxon is the one that created the problem.... I think that with time the community can heal itself emotionally.

I don't feel sorry for myself at all. I've very proud of what I've done and what we've built [here].

As a long-time resident and community leader stated, "There still is a lot of pride in the community."

## CHAPTER VII

### CONCLUSION

#### 7.1 Introduction

Despite the fact that 15 years have passed since the grounding of the *Exxon Valdez* on Bligh Reef, at many levels it seems premature to write a conclusion to this dissertation. Though called for by academic convention, it is challenging to close this work while so much remains unfinished with respect to the *Exxon Valdez* oil spill (EVOS) for residents of Cordova and others in Prince William Sound (PWS). In Erikson's (1976a) conclusion to *Everything in its Path: Destruction of Community in the Buffalo Creek Flood*, he writes on behalf of lawyers, legal assistants, and others associated with litigation in that 1972 disaster:

... [A]ll of us felt that we had come to an end of a very important episode in our lives and were about to move on to other personal and professional concerns. That sense of finality, in fact, is what makes it possible to write a book like this: the whole event is recorded in the mind as having an opening date and a closing date, a first chapter and a last. (P. 248)

Unfortunately, the same cannot be said regarding the EVOS. One of my interviewees offered an equally compelling, though non-academic perspective:

The problem is if you are trying to write a report on this and you see too many endless possibilities, you would never finish it. Every time you open one door, there will be two more doors. If you open one of those doors, there are two more doors. So you [have to] stop opening doors. At one point you start drawing conclusions from the doors you have opened.

Indeed, my research in Cordova opened many intellectual doors. I must now attempt to draw some conclusions regarding what I found behind those doors.

In attempting to capture, present, and interpret voices of Cordova, I am certain I have omitted some important piece of the proverbial puzzle that would assist in better understanding impacts of the EVOS on the community. With that said, the findings of my research in Cordova shed light on the potential of social capital theory to contribute to our knowledge about long-term social impacts of technological disasters by providing an integrating framework for extant research in these arenas. This chapter begins with a review of the theoretical framework for this dissertation. I then recap my research findings and discuss social and disciplinary implications of these findings, as well as possible implications for post-technological disaster intervention. Following this, I discuss the nature of my work in Cordova, including challenges, personal experiences during my fieldwork, comments about my research by participants, and limitations of this study. Next, I suggest implications of findings for future directions for research on technological disasters, natural disasters, and social capital. Finally, I address the future of Cordova based on perceptions of residents.

## **7.2 Review of Theoretical Framework**

Technological disasters such as the EVOS set in motion a complex set of social and psychological processes associated with human responses to environmental degradation. In an attempt to better understand these processes, the following research questions were addressed in this dissertation by presenting and interpreting qualitative and quantitative data on the EVOS:



1. How do the ecological-symbolic approach and renewable resource community concept contextualize social capital when environmental degradation occurs as a result of a technological disaster?
2. What relationships exist between social capital and recreancy following a technological disaster?
3. What relationships exist between social capital, individual stress, and collective trauma in the aftermath of a technological disaster?
4. What relationships exist between social capital and emergence of a corrosive community in the wake of a technological disaster?
5. What relationships exist between social capital, lifestyle change, and lifescape change following a technological disaster?
6. What relationships exist between social capital and secondary disasters associated with a technological disaster?

The interrelatedness of these questions and the concepts associated with technological disasters are presented in Figure 7.1 – the theoretical framework for this dissertation.

Qualitative findings – narratives of Cordovans’ recollections of their experiences with the EVOS and its aftermath – assist in discerning the usefulness of social capital theory to integrate various strands of existing technological disaster concepts and theories, including research on stress, coping, and risk. Quantitative data on social impacts of the EVOS collected over more than a decade contextualize qualitative findings presented throughout this dissertation. Examining qualitative and quantitative data using social capital theory offers insights into social impacts of the EVOS and technological disasters in general.

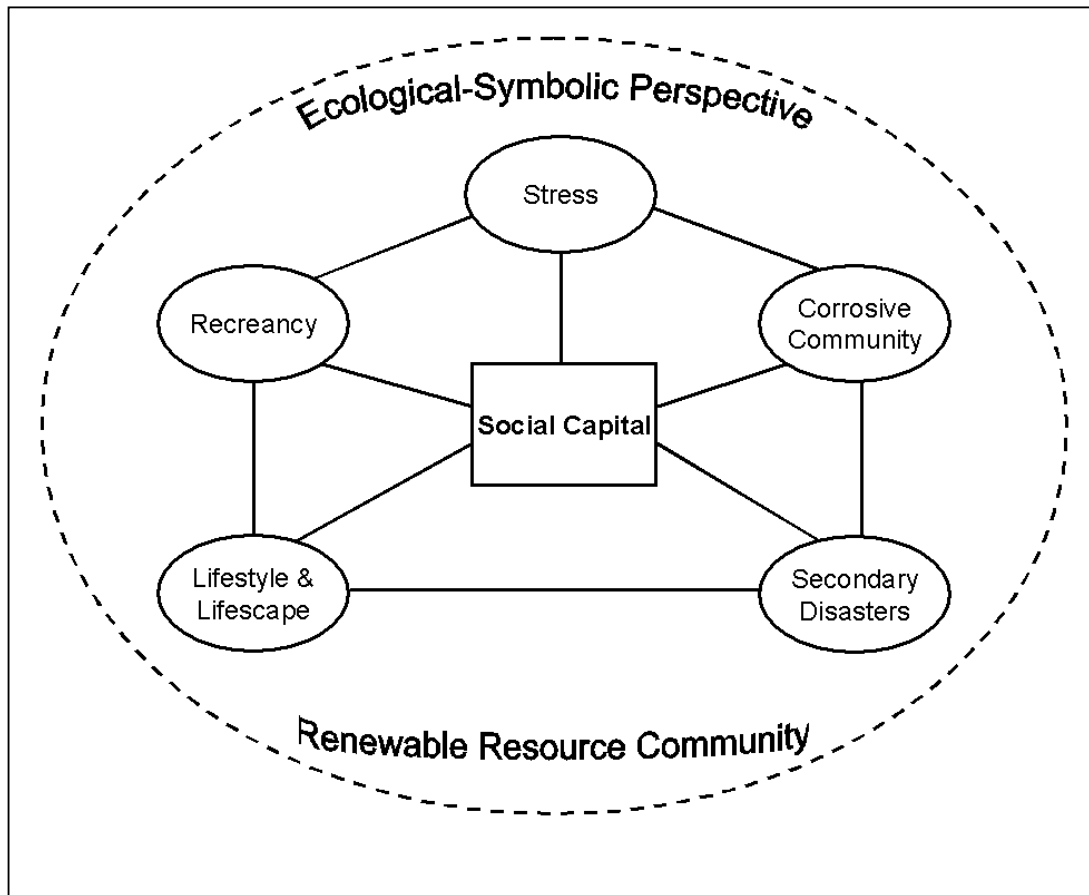


Figure 7.1 – Theoretical Framework: Social Capital and Technological Disaster Concepts

### 7.3 Summary of Research Findings

*Research Question 1: How do the ecological-symbolic approach and renewable resource community concept contextualize social capital when environmental degradation occurs as a result of a technological disaster?*

As presented in Chapter IV, the ecological-symbolic perspective and renewable resource community (RRC) concept are integral to considering and contextualizing social capital in Cordova. Cordova's status as an RRC has clearly influenced community interpretive processes and limited community recovery in the years following the EVOS. From an ecological-symbolic perspective, damage to PWS, coupled with strong ties Cordova residents have to their natural environment, have made the community especially vulnerable to bioregion disruption associated with the oil spill. Furthermore, because lifestyles and livelihoods of Cordovans are dependent on seasonal cycles in the ecosystem, residents are collectively more susceptible to social, cultural, economic, and psychological impacts of environmental degradation.

The anticipatory utilization cycle presented in Chapter IV depicts how cultural cycles correspond to environmental/biological cycles. Although the original model (Dyer, Gill, and Picou 1992) primarily focused on Alaska Natives, I refine the model in several ways. First, I extend application of the model beyond Native populations to non-Native RRCs (e.g., Cordova). Second, reconsidering the chronology of subsistence activities and events presented in the original model, I revise the order of phases to more accurately reflect what occurs. Specifically, I combine the existing first and fourth phases of the model, "preparation" (T<sub>1</sub>) and "anticipation" (T<sub>4</sub>), respectively, collectively redefining

them as  $T_1$ . Furthermore, I introduce “reflection” as  $T_4$ , thus capturing the essence of the culmination of previous harvest and utilization activities. These changes, combined with a discussion of how different cultural processes presented in the model significantly overlap, more appropriately mirror cycles in an RRC like Cordova.

Finally, I consider several additional issues with respect to a revised anticipatory utilization cycle. Although it is tempting to conceptualize  $T_1 - T_4$  as corresponding to seasons of spring, summer, autumn, and winter, respectively, this is not necessarily the case. It is equally important to bear in mind that different types of subsistence activities may be concurrently occurring, though in different phases of the anticipatory utilization cultural cycle at any given time of year or season.

The natural, built, and social environments of Cordova represent critical contextualizing factors in considering social capital in the community. In particular, the subsistence lifestyle that most Cordovans practice represents a now rare and “pure” form of social capital not found in non-RRCs. The symbolic sharing of subsistence resources is a distinct form of social capital that fosters trust, association, social cohesion, and additional social capital. Decreases in subsistence practices in Cordova represent cultural and social structural changes, generating chronic, collective stress and diminishing social capital. According to social capital theory and qualitative research findings presented in this dissertation, such a milieu hinders a community’s capacity for collective action.

Finally, the size, physical location, and relative isolation of Cordova contextualize and influence how social capital is manifested in the community. Because there are fewer than 2,500 residents in Cordova, changes in trust, associations, and norms of reciprocity are more readily discernable, and are more likely to affect social cohesion. This impacts

the collective rather than small pockets of the community as might occur in more urban settings or communities with easy and affordable access to “the outside.”

*Research Question 2: What relationships exist between social capital and recreancy following a technological disaster?*

Narratives presented in Chapter V of this dissertation describe specific experiences of Cordovans associated with the EVOS in 1989. In addition to providing compelling recollections of personal accounts of the event that contextualize subsequent research findings, interviewees expressed loss of trust in “the system” and other feelings of recreancy in the aftermath of the oil spill. Inherently, recreancy – “the failure of experts or specialized organizations to execute properly responsibilities to the broader collectivity with which they have been implicitly or explicitly entrusted” (Freudenburg 2000:116) – is about abstract trust. Narratives of Cordovans clearly express beliefs about recreancy related to: (1) the grounding of the tanker, (2) lack of preparedness to contain the spill, and (3) subsequent cleanup activities. Moreover, as discussed in Chapter VI, many Cordovans see ongoing EVOS-related litigation as preventable, essentially believing that the federal government and the U.S. court system have been and continue to be recreant by failing to properly execute their responsibilities to settle the case “with the degree of vigor necessary to merit the societal trust they enjoy” (Freudenburg 2000:108). Although this latter conceptualization of recreancy is, I believe, beyond Freudenburg’s (2000) original intent in his discussion of risk and perceptions of risk, my research findings warrant such an extension. Viewed as specialized organizations with specific responsibilities to the broader collectivity, the legal system and the federal

government are seen by many Cordovans as continuing to fail to carry out their responsibilities. For example, narratives of Cordovans articulate beliefs that the government should have kept Exxon from merging with Mobil until the EVOS litigation was finalized. Beliefs about recreancy disrupt ontological security, a prerequisite for social capital; maintenance and creation of formal social capital (trust in institutions or organizations) are difficult if not impossible in an atmosphere of diminished abstract or generalized trust.

*Research Question 3: What relationships exist between social capital, individual stress, and collective trauma in the aftermath of a technological disaster?*

As discussed in the literature review (Chapter II), empirical research indicates individual stress and collective trauma associated with technological disasters influence social dynamics. Social capital research suggests a stable social structure is critical for developing and sustaining social capital through associations. Qualitative and quantitative findings presented in Chapter VI of this dissertation suggest that a “pressure cooker” effect (Hobfoll 1991) of shared trauma has influenced social capital in Cordova since the EVOS.

Framing narratives of those I interviewed within the COR model of stress informs how the EVOS impacted social capital in Cordova. Generally, according to quantitative data, perceived loss or threat of loss of objects resources, conditions resources, personal characteristics resources, and energies resources have resulted in collective stress among specific groups of Cordovans – primarily Alaska Natives and commercial fishermen, and particularly among commercial fishermen who are Alaska Natives. Specifically, as

described by Cordovans in their narratives, it may be argued that social capital at an individual level is a form of condition resource. Conceptual relatives of social capital, including aspects of trust, ontological security, associations, and norms of reciprocity can be considered conditions resources. Moreover, diminished trust, ontological security, and changes in norms of reciprocity accompanying technological disasters create feelings of uncertainty, insecurity, and loss or lack of control. In the COR framework, these perceptions are manifested as personal characteristics resource losses at an individual level. Like income loss spirals of Cordovans identified by Arata et al. (2000), narratives of Cordovans suggest social capital loss spirals since 1989 as they have invested various condition resources and personal resources without return or gain. In terms of social capital, this means people may stop investing or may reduce their investment (i.e., cut their potential losses) in the community's social capital.

Considering social capital in this light, it follows that a relationship emerges between diminished social capital and stress. Stress may increase when social capital is depleted or with a threat of loss of social capital (e.g., potential for people to move from a community). Conversely, a social environment rich in social capital may serve to ease tension and reduce stress. Conceptualizing aspects of social capital as condition resources offers research opportunities to (a) use existing COR items in natural and technological disaster research as proxy measures for social capital and (b) develop unique social capital items or incorporate existing social capital measures (e.g., Putnam 2000) for future use with the COR approach.

Importantly, from a sociological perspective, although social capital may be considered a condition resource there is more to social capital than how it relates to

stress. That is, it is not enough to examine social capital using the COR model – social capital is far broader than that. Social capital addresses issues associated with a community’s *capacity* to take collective action to resist threats and take advantage of opportunities. Social capital is about *community effectiveness*. Narratives presented in this dissertation reveal that Cordovans consider and articulate stress at an *individual* level, but that they articulate diminished social capital in terms of the community’s ability to accomplish collective goals for the “greater good” of the town.

Examining coping behaviors in the aftermath of the EVOS further illuminates relationships between individual stress, collective trauma, and social capital in Cordova. A social atmosphere of chronic collective stress is not conducive to maintaining or nurturing social capital. Narratives describing avoidance behaviors, as well as quantitative data from EVOS research since 1989 provide evidence that interactions and associations fundamental to social capital have been disrupted since the oil spill. Indeed, as articulated by interviewees, situations that once fostered opportunities for interaction (i.e., generation of social capital) have become settings that create stress for many Cordovans. Avoidance of stressful situations, such as not attending town meetings, staying away from reminders of the EVOS, and not talking about the EVOS, hinders flow of information and development of trust necessary for social capital. Moreover, diminished trust generates additional collective stress – again, contributing to social capital loss spirals.



*Research Question 4: What relationships exist between social capital and emergence of a corrosive community in the wake of a technological disaster?*

Uncertainty, lack of consensus, recreancy, and general social disruption characterize a corrosive community following technological disasters. Narratives presented in Chapters V and VI of this dissertation offer recollections of Cordovans on these issues immediately following the EVOS through 2003. Particularly in the context of quantitative data collected between 1989 and 2001, it is apparent most animosities and distrust among Cordovans are perceived to be directly related to oil spill cleanup activities and subsequent EVOS-related litigation.

Disruption of social dynamics associated with a corrosive community affects social structure. Once again, because social capital is dependent upon social stability, a corrosive community may be characterized by diminished social capital. In a corrosive community, patterns of formal and informal social interaction are altered, influencing trust, communication, and norms of specific and – more important for community effectiveness – generalized reciprocity. Interaction enhances opportunities for consensus building and shared understanding; without it, there is a minimal basis for effective collective action. Limited shared assumptions about the nature and extent of damage in the wake of a technological disaster result in uncertainty, distrust, and individual and collective stress. In a corrosive community, informal social capital (micro level trust) and formal social capital (macro level trust in groups, organizations, and systems) are depleted. Narratives of Cordovans describe diminished social capital today stemming from a corrosive community milieu in the wake of the EVOS. Moreover, physical capital is less effective in settings where social capital is diminished.

*Research Question 5: What relationships exist between social capital, lifestyle change, and lifescape change following a technological disaster?*

Lifestyle change and lifescape change influence social capital. Daily routines are altered in response to technological disasters, resulting in lifestyle changes. Lifestyle changes influence informal social capital by disrupting “normal” patterns of social interaction. Although lifestyle changes occur as *coping* mechanisms for disaster-induced physical and psychological stress, they also may *result* in individual and collective stress.

Changes in lifestyle tend to alter people’s lifescapes – individual and collective changes in beliefs about how the world operates. Lifescape changes may be stress inducing or may serve to *alleviate* stress by reframing how individuals and collectivities perceive their place in society (e.g., “accepting” they have little or no control of life events). In the long term, lifescape changes are reflected in lifestyle decisions. Mutual influences of chronic collective stress – such as in Cordova following the EVOS – and lifestyle changes and lifescape changes employed to cope with stress lead to diminished social capital.

Narratives presented in Chapters V and VI of this dissertation indicate that Cordovans have experienced both lifestyle and lifescape changes which they perceive to be directly or indirectly related to the EVOS. Lifestyle changes were more “tangible” or easily articulated by the interviewees compared with lifescape changes – particularly with respect to changes associated with the fishing industry, PWS, and economic conditions in the community. Lifestyle changes were described in terms of altered daily and seasonal routines – again, demonstrating the importance of an ecological-symbolic perspective for understanding impacts of technological disasters on RRCs and subsistence activities.

Lifescape changes were expressed with respect to diminished ontological security, especially loss of trust in big business, the U.S. government, and the U.S. judicial system.

Narratives suggest lifescape changes influence community interactions as a consequence of diminished abstract trust. Narratives also described *loss* of personal control or *lack* of personal control since the EVOS. I refer to these expressions of diminished personal control as “reluctant resignation” resulting from chronic stress as well as chronic uncertainty. This is not to say that the community is not carrying on to the best of its collective ability. However, in essence, most of the people I interviewed appear to be in at least a mental “holding pattern” if not a lifestyle “holding pattern,” waiting for closure on the EVOS. These issues are further discussed in response to research question six.

Finally, narratives of Cordovans suggest outsiders have difficulty understanding stress, lifestyle changes, and lifescape changes they have experienced. Concerns about being considered “whiners” or that people in the Lower 48 do not understand why the EVOS continues to impact the community 15 years later were expressed often during my interviews. Concerns about lifestyle and lifescape changes reflect (1) that life in Cordova was difficult to “explain” to outsiders before the EVOS occurred and (2) that it is not easy to articulate fundamental lifescape changes accompanying traumatic life events such as a technological disaster. These issues pose challenges to the community’s ability to realize benefits of bridging social capital – the form of social capital Putnam (2000) refers to as “sociological WD-40” – with entities, institutions, and organizations beyond its geographic and social boundaries.

*Research Question 6: What relationships exist between social capital and secondary disasters associated with a technological disaster?*

Narratives of Cordovans reveal that the community continues to experience effects of at least two primary forms of secondary disasters in the wake of the EVOS: (1) litigation and (2) diminished social capital. Social impacts of protracted litigation are becoming better documented in technological disaster literature. Beyond uncertainty associated with environmental degradation in PWS, Cordovans are living with chronic uncertainty regarding litigation outcomes and possible social and economic ramifications for the community. As discussed in Chapter VI of this dissertation, litigation that began virtually the day after the oil spill in 1989 serves as a constant, unpleasant reminder of the oil spill. As articulated in narratives, protracted and complicated litigation processes now represent a significant source of stress not only for those directly involved, but also for the broader community. Qualitative and quantitative findings regarding EVOS litigation provide evidence that negative litigation-related attitudes and experiences percolate throughout the Cordova community. Beliefs that litigation has gone on too long, that Cordovans have spent too much time with lawyers as a result of the litigation, and that they have lost a certain amount of ontological security as a consequence of dealing with the litigation process are apparent in Cordovans' narratives. These beliefs about EVOS-related litigation compromise social stability in Cordova. Because many Cordovans are expending social and psychological resources to cope with chronic uncertainty and stress – much of which is related to protracted EVOS litigation – their capacity to invest in the community's social capital is limited. This influences available social capital, further encroaching on social stability.

As addressed in research questions three through five, diminished social capital in Cordova is related to (1) individual stress and collective trauma, (2) the emergence of a corrosive community, and (3) changes in lifestyle and lifescape after the EVOS. Acute social impacts of the EVOS have become chronic – largely due to ongoing litigation. Narratives of Cordovans expressed concerns about a reemergence of community divisions and animosities in the event of a punitive damages payout from Exxon. Many people believe a payout will result in resurfacing tensions between “haves” and “have-nots” that existed in the immediate aftermath of the EVOS because of lucrative cleanup contracts, further straining social ties in the community. Chronic social impacts associated with litigation as a secondary disaster continue to deplete reserves of social capital in Cordova. Again, considering aspects of social capital as condition resources, loss or threat of loss of social capital (e.g., anticipation of renewed animosities in the event of a payout) is a source of collective stress.

Qualitative and quantitative research reveal that a number of families have “permanently” moved from Cordova or spend considerably less time in the community as a result of economic conditions and, in some cases, social conditions. For example, seasonal commercial fishermen who before the EVOS returned to Cordova weeks in advance of the fishing season now arrive at the proverbial last minute – perhaps just a couple of days prior – because they cannot financially afford to come back earlier or because they hold down another job for as long as possible in the off season. Particularly in a community the size of Cordova, subtle changes like these in the community’s social fabric influence social capital.

As discussed in Chapter VI of this dissertation, each time a family or individual moves, social capital – as well as physical and human capital – is at least temporarily diminished. Moreover, when arriving newcomers ostensibly “replace” people who left they do not share the same EVOS experiences and are thus less able to relate to concerns or lifescapes of their neighbors. These circumstances influence associations and networks – social capital. Narratives presented in this dissertation also suggest that individuals who have left Cordova have faced challenges “outside,” with others not understanding their circumstances.

Qualitative and quantitative data suggest that Cordovans believe many people will leave the community in the event of a litigation payout. Data collected from Alaska Natives and commercial fishermen in 2001 reveal that 73.5 percent of respondents believe it is “very likely” or “likely” that members of the community will leave Cordova in the event of a litigation payout (Gill 2002). Implications of these beliefs are twofold. First, if people are considering moving from Cordova, it is reasonable to assume that they are making fewer financial and social investments in the community. In other words, people may believe there is little value in investing social capital in a place where they do not intend to live long term. Second, if Cordovans believe their friends or neighbors plan to leave town, individuals intending to remain might be less willing to “invest” social capital in their interactions with those planning to leave or those they “think” are planning to leave. This situation is exacerbated because this threat of loss has been drawn out over an extended period of time.

Finally, because so many individuals at once in the Cordova community are simultaneously experiencing different types of resource losses – objects, personal

characteristics, conditions, and energies – the collective capacity to address issues affecting or potentially affecting the community as a whole is diminished. My research findings suggest that the EVOS initiated a social capital loss spiral in Cordova, comparable to economic loss spirals previously documented in the community. Social capital loss spirals decrease availability of latent social capital – potential individual and group energy. Social capital loss spirals hinder Cordova’s ability to take effective collective action to address social and economic issues facing the community. For example, as of the writing of this dissertation, the Cordova hospital is on the verge of closing in part because it appears consensus cannot be reached regarding how economic viability can be maintained. From this perspective, diminished social capital represents a form of secondary disaster.

Collectively, the narratives of Cordovans I interviewed describe diminished social capital that began with the EVOS in 1989 and from their perspective continues to impact the community. Importantly, no one I interviewed or informally spoke with attributes all of the community’s ills – social or economic – to the oil spill. However, narratives and conversations describe how initial social impacts of the event drew down micro- and macro-level stores of social capital that have yet to recover. Moreover, narratives of Cordovans reveal hope but uncertainty as to whether social capital will ever be restored – particularly given the continuation of EVOS litigation. In some instances, it appears the community has been able to come together to meet challenges (e.g., an avalanche or death of a resident); in other cases (e.g., arenas of economic challenges, commercial fishing market forces, and environmental recovery) it appears social capital may be so diminished that full recovery from social effects of the spill may not be possible.

#### 7.4 Social Implications of Research Findings

Social capital, defined as “connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them” (Putnam 2000:19), facilitates actions of individuals and organizations within social structures. It also facilitates effective use of physical capital and human capital. The presence of active social capital in a community facilitates attainment of individual and group goals; latent social capital represents potential individual and group energy. Social capital is a micro-level, meso-level, and macro-level phenomenon. At meso- and macro-levels, social capital is an indicator of community well-being.

Complexities of today’s modern society have created a milieu in which the probability of the occurrence of technological disasters is high. Since the early 1990s, social scientists have referred to this as a “risk culture” (Giddens 1990, 1991) or “risk society” (Beck 1992), where risk is tied to conditions of late modernity – particularly technology. Insights into social causes and human responses to technological disasters fall within the purview of social scientists.

As discussed by Couch, Kroll-Smith, and Kindler (2000), sociologists investigating hazardous environments “are not simply discovering social and behavioral patterns, they are also, and perhaps more interestingly, *inventing* them” (p. 174; italics added). In communities experiencing social disruption associated with technological disasters, the language of sociology becomes seen as a potential resource for making sense of disorder.<sup>1</sup> Social capital theory offers a way of articulating community-level

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<sup>1</sup> As Couch, Kroll-Smith, and Kindler (2000) observe, adoption of sociological knowledge by laypersons to describe their situations does not only happen in communities that have experience technological disasters.



social impacts of technological disasters that may be valuable to local residents, community leaders, and policy makers. For example, recognizing that diminished social capital is a likely short- and long-term consequence of technological disasters affords opportunities to develop policies for risk assessment and risk management. Moreover, understanding ways diminished social capital hinders community effectiveness has implications for community recovery, rehabilitation, and transformation in the aftermath of technological disasters.

Social structural changes accompanying technological disasters disrupt “normal” patterns of everyday life – situations that generate and maintain social capital. Realizing that social capital primarily emerges as a byproduct of other activities is especially critical in the wake of a technological disaster when communities are in the midst of social upheaval. Post-disaster interventions designed to facilitate an understanding of the importance of social capital for community effectiveness, as well as implementation of programs developed to maintain and foster social capital, would in the short-term contribute to community stability and enhance prospects for long-term community recovery and transformation. Timely implementation of post-technological disaster interventions is a challenging endeavor. Indeed, “individual and social recovery must be attempted in the midst of continuing social and psychological impacts” (Picou, Formichella, and Arata forthcoming; also see Picou, Johnson, and Gill 2001).<sup>2</sup> Therefore,

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<sup>2</sup> Six years after the EVOS the “Growing Together Community Education Program” (January 1996 to February 1997) was implemented in Cordova. Using a community participation model, the program included among other strategies the Helping Others Peer Listener Training Program and Alaska Native Talking Circle. For details about components in the “Growing Together Community Education Program” see Picou, Formichella, and Arata (forthcoming). These innovative approaches resulted in the development of *Coping With Technological Disasters: A User Friendly Guidebook* (Prince William Sound Regional Citizens’ Advisory Council 1999).

*not* actively and immediately addressing social impacts of technological disasters exacerbates likelihood of diminished social capital as a secondary disaster.

Finally, understanding that protracted litigation associated with technological disasters has deleterious effects on communities holds considerable social implications – particularly for the U.S. legal system. Empirical evidence presented in this dissertation and elsewhere (e.g., Picou, Marshall, and Gill 2004) strongly suggests that it will not be possible for the Cordova community to fully recover from social impacts of the EVOS without some sort of closure on the litigation process. This situation and others beg a reexamination of our current judicial system (see Marshall, Picou, and Schlichtmann forthcoming).

### **7.5 Disciplinary Implications of Research Findings**

Each of the six questions addressed in my research draws from studies of disaster-related stress, social impacts of disasters, and risk. None of the existing theories in the discipline address long term-implications of how these combine to diminish community effectiveness or capacity. Research findings of this dissertation suggest that social capital theory holds potential as a valuable sociological framework for integrating existing research on technological disasters. Moreover, my research findings have implications for advancing social capital theory as will be discussed in the following sections.

### 7.5.1 Implications for Technological Disaster Research

As discussed in Chapter II of this dissertation, the promise of social capital theory for use in disaster research broadly includes: (1) a focus on patterns of relations between individuals, social units, and institutions; (2) the potential to make connections between different levels of analysis; and (3) the value of social capital as a heuristic tool. These merits make social capital worth continuing to explore as an integrating theory for disaster research in general and research in technological disasters in particular.

Current technological disaster research takes us to the “what” of technological disasters but does not adequately address the “so what” of technological disasters. To borrow the language of program evaluation, the “what” refers to the output of a program, the “what takes place” in the program. More importantly, the “so what” of a program refers to program outcomes – what difference did a program make? Adapting this language of program evaluation in technological disaster research, the “what” is empirical evidence demonstrating that collective stress, collective trauma, corrosion, lifestyle change, lifescape change, diminished ontological security, and feelings of recreancy emerge in communities following a technological disaster. Social capital theory collectively advances these important concepts by addressing the “so what” of empirical evidence. In other words, social capital theory offers an opportunity to more fully understand how documented social impacts of technological disasters combine to encumber community effectiveness. Each of the concepts drawn from existing technological disaster theory is tied to social capital. Considering these various notions with respect to how they are related to social capital preserves the integrity of the

concepts while at the same time providing a meaningful integrating framework useful for basic and applied technological disaster research.

There are further implications of social capital theory for use in technological disaster research. The *language* that has been used in successfully attempting to distinguish social impacts of technological disasters from natural disasters over the past several decades may have in some ways stigmatized individuals and communities experiencing technological disasters. Although “stress” and “collective trauma” certainly emerge in the aftermath of a technological disaster and appropriately characterize what occurs, stigma associated with using language of mental illness may not necessarily serve long-term interests of impacted communities or the general public’s attempts to understand them. For example, literature on rape and incest often refers to “survivors” rather than “victims.” Along these lines, I propose that language we use to describe social consequences of technological disasters can become empowering rather than debilitating.<sup>3</sup> Similarly, though an apt descriptor, a “corrosive community” does not necessarily entice support from outsiders. Who wants to touch something corrosive?<sup>4</sup>

Couching social impacts of technological disasters using language of social capital theory has significant potential to: (1) reduce stigma associated with being involved in a technological disaster; (2) enhance beliefs of survivors about their ability to *do* something to offset negative ramifications of diminished social capital; and (3) improve chances for broader public support and policy change. MacGillivray and Walker (2000) argue, “If the notion of social capital is to be accessible beyond the realms of

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<sup>3</sup> Certainly, it may be argued that there have been “victims” of the EVOS – most apparently those who committed suicide.

<sup>4</sup> For an interesting discussion of why language matters in evaluation research see Hopson (2000).

policymakers and academics, it must become a tool that communities can use to improve their quality of life” (p. 200). Similarly, I suggest that using social capital theory in technological disaster research has potential to become a tool that communities experiencing technological disasters can employ to enhance recovery processes and rebuild trust, associations, and norms of reciprocity.

Conceptualizing aspects of social capital – particularly micro-level social capital – as condition resources is another finding that holds promise for disaster research. Although certain items in Hobfoll’s (1988) conservation of resources (COR) model already captures aspects of social capital, concerted efforts to include social capital further extend this already useful framework for interpreting social and psychological impacts of technological disasters. Specifically, research employing the COR with the inclusion of social capital items may reveal more about social capital loss spirals following technological disasters. This expanded conceptualization of condition resources holds further implications for use in studying natural disasters.

Finally, though the focus of my research has been to advance understanding of the potential for social capital theory in technological disaster research, there are compelling reasons to consider employing social capital theory in natural disaster research, as well. Some disaster researchers argue that there is little or no value in discerning between social impacts of technological and natural disasters (e.g., Quarantelli 1985, 1992, 1998). Social capital theory may provide an appropriate approach to further distinguish social impacts of technological and natural disasters by offering an opportunity to compare “apples” to “apples” – i.e., assessing perceived changes in social capital in communities in the aftermath of disasters. If communities experiencing natural disasters emerge

stronger through an “amplified rebound” associated with emergence of a therapeutic community (rather than a corrosive community), as some research suggests, do they also experience an “amplified rebound” or surge in social capital? Conversely, if there really is little or no difference between social impacts of natural and technological disasters, we would anticipate little or no difference in perceived level of social capital in respective communities experiencing these collective traumas.

### 7.5.2 Implications for Social Capital Theory Research

As social capital theory informs technological disaster research, technological disaster research has implications for social capital theory research. A review of literature reveals several broad measurement issues associated with studying social capital.<sup>5</sup> Of most significance for this dissertation, Schuller, Baron, and Field (2000) assert, “The value of social capital as a concept is not best served by pinning it tightly to the latest quantitative modeling techniques” (p. 27). As discussed in Chapter III of this dissertation, because social capital is a dynamic, relational phenomenon, it requires examination from a variety of perspectives. This cannot be accomplished solely through a quantitative methods approach, which has been the most common methodological approach in social capital research.

Recent social capital theory literature has called for improved measures of social capital. Specifically, there is a demand for qualitative studies to improve understanding of different forms social capital takes in local communities (e.g., Campbell 2000) and for studies combining qualitative and quantitative approaches to examining social capital

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<sup>5</sup> See Chapter III for more detailed information on these issues.

(e.g., Paxton 1999; Schuller, Baron, and Field 2000). The research design used in this dissertation combined qualitative methods with a review and presentation of extant quantitative data. A narrative constructivist perspective is well suited to addressing issues associated with social capital; analyzing narratives of community members provides insights into different ways social capital is locally manifested and thus how diminished social capital or, conversely, how high levels of social capital are perceived to affect a community.

Just as an ecological-symbolic perspective takes into account a community's relationship with its environment in assessing impacts of environmental degradation it is worth considering how an ecological-symbolic perspective contextualizes trust, associations, and norms of reciprocity associated with social capital. Findings of this dissertation research include perceptions of how social capital was manifested in Cordova prior to the EVOS and in subsequent years. These findings suggest that because Cordova is an RRC and because a majority of Cordovans participate in a subsistence lifestyle, social capital is also manifested in ways different from those we might expect to find in urban settings. Although basic "forms" of social capital – trust, associations, norms of reciprocity – exist in RRCs and non-RRCs, narratives presented in this dissertation reveal how tangible social capital is in Cordova. For example, though it is reasonable to believe that civic involvement is an appropriate proxy for social capital in an urban setting, participation in subsistence activities is an appropriate consideration for an RRC like Cordova. Thus, research using social capital theory to examine social impacts of technological disasters has potential to extend conceptualizations and refine measurement of social capital.

Further exploration of dimensions of social capital theory is required before suggesting additional implications of technological disaster research in this arena. However, I propose that for social capital researchers, disaster research represents possibilities for taking social capital theory beyond its current “adolescence” (Schuller, Baron, and Field 2000) into adulthood.

## **7.6 Limitations and Challenges of the Study**

The primary limitation of this dissertation research may be summed up by the following comment of one Cordovan: “What the hell would life have been like if that tanker hadn’t hit that reef? We don’t know.... They don’t know. Nobody knows.” Because there essentially were no baseline measures of social capital in Cordova we must heavily rely on pre-spill recollections of local residents presented in narratives more than a decade later. Although some might consider this problematic, quantitative research on reliability of delayed self-reports in disaster research (Norris and Kaniasty 1992) suggests “disaster victims remember their experiences quite accurately over time” (p. 587).

Narratives of Cordovans represent their perceptions of life in Cordova prior to the EVOS and translate into their current realities. Their lifescapes and perceptions of ontological security, like the lives of people not living in communities impacted by a technological disaster, represent a dynamic culmination of individual and collective experiences. Certainly, understanding how individuals and communities respond to social impacts of technological disasters is a complex endeavor. Narratives of EVOS survivors presented in this research reveal intricacies and nuances of social impacts of the oil spill and, to a degree, how interpretations of the event have evolved over more than a decade.



Social impacts of the EVOS and other technological disasters are not static or fixed. As individuals and groups interact, interpretations of events are socially constructed, deconstructed, and reconstructed over time, influenced by new experiences and insights. Researchers are not exempt from this dynamic. As Couch, Kroll-Smith, and Kindler (2000) suggest, “From the point of view of traditional science, the process is messy, as sociologists become part of their own data, confounding the usual boundaries between themselves and their subjects” (p. 178). Similarly, Buroway (2003) identifies four issues for consideration when conducting ethnographic work: “(1) the relation of observer to participant, (2) theory brought to the field by the ethnographer, (3) internal processes within the field site itself, and (4) forces external to the field site” (p. 645). I believe it is our responsibility as sociologists to acknowledge that “the process is messy” and from that point attempt to create some sense of order based on that acknowledgment. Although this states the obvious, a danger in science lies with overlooking the obvious.

By undertaking this research “chore” as Erikson (1976a) might refer to it, I am in some ways attempting to speak for the community as a whole. One especially insightful Cordovan commented during his interview: “We realize you are here [doing research] for two reasons. One, we think you really want to help. But two, it is for yourself, not just for us.” In addition to my goal of obtaining a Ph.D. in sociology, I held several other goals for my research in Cordova, as described in my journal (August 28, 2002) prior to my fieldwork:

*... Gill asked ‘What’s in this for them [Cordovans] – besides \$50.00?’ I honestly believe that my work is going to provide a safe and rare opportunity for Cordovans to tell their story of living in limbo for 13 years. I have no stake in this, other than a genuine interest in what they’ve been through... and are going through. I want to be an ‘outsider’ who*

*understands, or at least one of a few who has tried. I'd like to give them a forum to express themselves and to give them a voice through my work. Done well, I believe this can help them and others.*

My dissertation research proposal articulated two additional goals and what I referred to as my personal commitment to: (1) honor the experiences of those with whom I interact and (2) express the narratives of Cordovans in a manner that reflects their unique heritage. Formal and informal feedback from interviewees and others in the community suggests I accomplished these goals.

Whether the research presented in this dissertation adequately captures voices of Cordova is an additional consideration with respect to limitations of my study. At times I have felt as one Cordovan expressed during her interview, “It is really hard to talk for the community as a whole, being one person. I am hesitant to try to do that.” Since the inception of my work, I have thought of my research endeavor as a forum for letting the voices of Cordovans be heard. Put another way, I am *not* the “voice of Cordova.” There is no one voice of Cordova, as this narrative states:

I don't want to have anybody else telling what I think about it because they don't know what I think about it anymore than I know what anyone else thinks of it. I can only speak for myself.... A lot of things get lost in interpretation. I know the Bible sure has. I think if you just keep it plain and simple, it's pretty hard to mess that up. It's when [researchers] use those big words is when they start to screw things up.

The community of Cordova consists of many extremely thoughtful, articulate, intelligent individuals who have strong opinions and beliefs. With that said, I recognize that my research design did not include three groups who might further illuminate aspects of social capital in Cordova in the aftermath of the EVOS. First, my research design relied on the presence of interviewees in Cordova and I did not attempt to include former

Cordova residents who had moved from the community since 1989. In light of my suggestions that social capital in Cordova was diminished as a consequence of people leaving the community, there is likely some potential benefit in including this population in future qualitative research. Second, I did not interview any members of the Filipino or Hispanic communities in Cordova. Certainly, in recasting social impacts of the EVOS in terms of social capital, these voices should be solicited, heard, and incorporated into future studies – though admittedly this poses challenges in terms of access and language barriers. Third, my research design did not include relative newcomers to Cordova – people arriving post-spill who have since the early 1990s made Cordova their home. Although these perspectives are, to a degree, captured via quantitative community studies (e.g., Picou et al. 2001), there is a place for qualitative research to expand knowledge about social capital from perspectives of those who did not directly experience the oil spill and its immediate aftermath.

In summary, although my findings do not represent all voices of Cordova – that would be impossible – I do believe I have tapped into a cross-section of my target population of Cordovans who were living in Cordova at the time of the EVOS. Moreover, I successfully broadened the work of previous EVOS research by conducting interviews with Cordovans who were not necessarily “town influentials” or people with whom previous researchers had closely interacted since 1989 (see Couch, Kroll-Smith, and Kindler 2000). As described in Chapter III of this dissertation only 12 of my 48 interviewees were introduced to me by Picou and Gill; the remainder I met or contacted on my own. Moreover, the fact that I am the only female to formally conduct sociological research in Cordova on long-term social impacts of the EVOS provides a unique

perspective. Thus, I was privileged to consider aspects of the community never before qualitatively examined – such as narratives of spouses of commercial fishermen. I suggest too, that my gender allowed many interviewees to feel more comfortable in sharing their emotions and personal experiences associated with the EVOS. Thus, I believe my research has effectively given voice to segments of the population not heard before.

One of the primary challenges of conducting research in Cordova is the fact that the population is relatively small and Cordovans have expressed a sort of “survey burnout.” This burnout may be attributed to three key factors as articulated by Cordovans in their narratives: (1) just as they are tired of filling out litigation-related paperwork, many people are tired of completing surveys via telephone and mail; (2) participation in EVOS research brings back difficult spill-associated memories they would rather not revisit; and (3) some individuals see little value in continued research, believing results are of little use to them at this point in their lives and with respect to the litigation. The following exchange I had during one interview with a female commercial fisherman succinctly reflects the first two of these issues:

R: Personally I came to a point where I didn't want to talk about this stuff any more. I feel better now actually talking to you about it right now, but there was a point there I didn't want to remember how I felt. It was not pretty to go back there and think those thoughts again and what I felt like. So I kind of backed away from it. I can say as recently as three years ago, I didn't want to talk about it. I didn't want to do any more surveys. It was like 'I don't want to think about that time anymore. I want to just get beyond it.' [But] I definitely didn't even think about that when you called up [and asked if I would talk with you]. It didn't even enter my mind. So, I've obviously moved past that, which feels fine. I can tell even just talking to you I feel like I've got a little bit emotional about this. Once again I am back in that place...

I: I'm sorry.

R: Oh, no.... That's okay.... It's just I realized it was a big part of my life and it did affect me.... I can tell right as we're talking I kind of feel a little bit affected by it. But when you first called up it was like 'Sure, come over. I'll answer your questions.' I'm not sure if you asked me four years ago that I would have.

Several informal encounters elicited comments about social science research activities in the Cordova community. I recounted in my journal one social gathering, where I was introduced and connected to the work of Gill and Picou. A commercial fisherman commented, "Oh, those forms [referring to the surveys]. I stopped filling them out a long time ago." In May 2003, when introduced by a Cordovan as a researcher studying social impacts of the EVOS, a fisherman quipped, "So, are you figuring out just how stupid and fucked up we are?" I laughed and replied, "No more than the rest of us, from what I can tell." My own experience is reminiscent of Dr. Gill's account of a long-term Cordova resident who told him, "I'll know that we're recovered when you guys stop coming up here to study us."

In the fall of 2002 I encountered an older commercial fisherman, in his mid-60s, at the CDFU offices who inquired as to why I was in Cordova. When I explained, "To study social impacts of the oil spill," he commented, "You're looking at the impact." As I documented in my journal (October 31, 2002):

*About two years after the spill he had a heart attack and was hooked to a monitor ... when visitors would discuss the spill, his heart rate would climb. Dr. said to cut it out! I took notes, but he doesn't want to be interviewed. Too upsetting. He felt it 'boiling up' inside of him, he said, as he motioned to his mid-section.... He's had to liquidate everything to stay afloat [financially].*

Although this individual clearly articulated why he did not want to be interviewed, I will never know how many others avoided me to keep from being asked to participate in my study.

A third factor limiting interest in EVOS research participation is revealed in this statement during one of my interviews: “What good is your paper going to do? What good is any research going to do? It [the oil spill and the litigation] is already done and [research is] not going to affect any outcome.” A commercial fisherman in his 60s offered this frank perspective when I asked if he saw any benefit of ongoing EVOS social science research:

No. I don't see shit coming out of it. I think it's interesting but I think it is just an academic endeavor. It's not going to change anybody. The best law firms in the country can't make some kind of thing happen out of this.... The only way it would help [would be if] people would realize by the study how this has affected people and what it really did to them.... If people would really realize what kind of trauma they [Exxon] were putting [us] through and really care about it and try to prevent, then it would have a positive effect.... I don't think [what you are doing] is without value. Don't get me wrong. I just think it is not going to change anything, that's all. But you know what, it is important to tell everybody's story.... Knowledge is very important.

Pausing and reconsidering his own words, the fisherman continued:

I would have to back track a little bit [on what I just said] and say it is important to know what happens and how it happens and what the long-term effects are of this and how people deal with it. Maybe ... it would just be positive if it would help people if they know how to deal with something like this if it happens to them.

Generally, many Cordovans recognize and appreciate the value of ongoing social research. These were expressed at two levels – personal benefit and beliefs about “the greater good” of research findings beyond Cordova and the EVOS:

You are collecting people's stories and that can never be a bad thing. You are probably getting things that people haven't talked about ever or haven't talked about in a long time, and it is probably cathartic in some ways for a lot of people to talk about.... As soon as it gets pushed back on the burner, nobody talks about it anymore then it doesn't exist. Sort of like ... any other tragedy.... In some ways [what you are doing] validates what happened for a lot of people.

I think what you are doing is really wonderful and important, if for no other reason than it gives people the opportunity to talk. Talking is healing.

Directly, [the EVOS research in Cordova] is not going to affect very many people. Indirectly, the work that Steve [Picou] and Duane [Gill] have done on coping with technological disasters is going to help a whole lot of people.... It already has, because it has been incorporated into different information that can get out to folks who don't know what's coming [after a technological disaster]. We were basically winging it [in Cordova after the oil spill]. [It was] on the job training. Now people don't have to do that so much. It's a little easier if you know what to expect. It's like going to the doctor and having them not tell you what they are going to do. If you know what is going to happen [to you], it's not so bad. It still is bad, but a certain level of stress is taken from it and problems are avoided.

I am of the belief that you need to actively seek out ways to heal yourself when you have been hurt.... You don't fully understand the impact that something is having until you become aware.... It gives you a little bit more of understanding. It gives you a little clarity. I don't think it takes away the pain ... [but] it does take it away somewhat because you have an understanding.... And you have an understanding for what your friends are going through.... When you can see an empirical study, when you can read something ... it gives you a little bit of a relief because it gives you understanding.... It gives you a key or a tool ... to deal with that pain.

According to many Cordovans I interviewed, my qualitative research approach was seen as valuable in that it allowed them to express their opinions and attitudes regarding the EVOS and its impacts on the community in ways survey research has not. Several people recounted difficulty in putting their EVOS experiences on a scale of 1 to 10, or on a scale of "strongly agree" to "strongly disagree," as required in most of the quantitative research to which they had been exposed. As I recounted in my journal, a

commercial fisherman and Alaska Native told me his experiences didn't always fall into the "parameters" (his word) of surveys. In that sense, many interviewees were grateful for the opportunity to tell their stories in their own words. Furthermore, several narratives distinguished between what I was doing and media interviews. Many interviewees indicated they had stopped participating in media interviews, as described in these narratives:

[In one early interview I did, the media] took [what I said] out of the context.... The words were fine, but ... when I was talking about something over here they would ... just cut and paste, put it wherever they wanted.... It was no longer portraying the truth because it was out of context. [After that] I decided not to give any more interviews.... It [was] all the truth, but the way they worded the facts, the way they [were] reassembled was not the truth.... We will just trust in how you put [our stories] together.

A lot of times you are being used [by the media]. People just use the things that they need when ... they do stories.... But in your case it's probably quite a bit different because you aren't trying to sell anything. You aren't selling a paper.

[The media] portray us mostly as a bunch of whiners and we are not.... When they come they just want to hear the negative stuff. They don't ever want to hear ... that there are some positive things.

[Based on my experiences with the EVOS] the credibility of the media just disappeared for me.... They came to town with the script already written and they just looked for sound bites to fill in, to tell their story that they knew that they had already. It was so obvious.

[Being interviewed for the media] is more like play-acting.... They want you to do things all the time.... You have to be careful. They will kind of choreograph an interview because they have their idea of what they want to convey. [With] that kind of interview you no longer have control about what you are trying to pass on to other people. It is going to get colored by what they are doing.... Whatever you say could be taken differently than you mean for it to be taken. That kind of interview is ... is going to be very misleading.... After awhile I just decided not to give anymore [interviews] because I didn't like the process.



Overall, interviewees expressed a level of confidence in my research efforts, a trust I considered a great responsibility as I worked in the field, reviewed and presented their narratives, and discussed my findings.

On a somewhat different vein, being associated with a long-term research endeavor such as the EVOS posed challenges I did not anticipate but, in retrospect, probably should have. As the following journal entry (August 28, 2002) reveals, I was considering my research role with respect to previous work in the community as I prepared to enter the field in Cordova:

*Who knows what to expect? ... I see myself walking down Main Street [in Cordova] and being very glad to be there again. I wonder how my presence will be received by the locals and how I'll make my way in the tradition of Gill's and Picou's efforts there.*

In addition to previously mentioned “survey burnout,” being associated with two individuals who had spent so much time in the Cordova community over the years carried with it what I can only refer to as “baggage.” In many cases, the entrée provided by Picou and Gill was positive and necessary for my research efforts; in other cases, I would describe this association as a drawback. I did my best to take advantage of opportunities presented by Cordovans who very apparently had embraced their previous research experiences, as well as carefully negotiate situations where I perceived my ties to previous research were deemed problematic.

Another unexpected issue in the field was encountering visitors to Cordova who challenged my reasons for being there. As documented in my journal (November 7, 2002), a trophy hunter ardently questioned me in the harbor one morning:

*'Aren't you just using these people? What are you doing to help? Aren't you just being a parasite?' Again, a lot of questions, but he won't shut up and wait for a response.*

More interesting than my numerous encounters with this “outsider” were responses of several locals to him “attacking” me, as they saw it. By my second visit, they defended my purpose for being in the community and, in essence, defended my research.

Finally, at a more academic level, a broader limitation of this research is the fact that my initial intent was not to employ social capital theory. Although vaguely familiar with the concept when I went into the field in late summer 2002, my dissertation research proposal focused on stress, lifestyle change, and lifescape change (Edelstein 1988 and 2000) among Cordovans since the EVOS. As I listened to narratives of Cordovans, however, I heard people saying – though not necessarily in sociological terms – the community’s social capital had been depleted following the oil spill. I subsequently adapted my theoretical approach to represent voices of Cordova. Unlike complaints from interviewees about media portrayals of their EVOS accounts, I believe I more appropriately adapted my framework to present what *Cordovans* were telling me rather than providing a rigid “script,” to use the word of one interviewee. In this sense, I believe I felt similar to Erikson (1976a) who hesitated to imprison Buffalo Creek flood survivors “between the cold parentheses of a theory” (p. 13).<sup>6</sup>

Although flexibility in this respect is a strength of this dissertation, it may also be viewed as a limitation: since my original interview guide was not developed using social capital theory and this framework did not emerge until reading more than 1,000 pages of

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<sup>6</sup> Similarly, I am hesitant to compare my own work with that of Erikson. However, I also concur with his approach of trying to “let the theory fall between natural segments of the story” (Erikson 1976a:13).

transcripts of narratives, I did not probe following interviewee responses to further explore issues of social capital in Cordova. I do plan to address this particular limitation by conducting additional follow-up research. Furthermore, in the tradition of Erikson's (1994) study of East Swallow in Fort Collins, Colorado in which he offered research participants an opportunity to comment on his report, I hope participants in my research will agree to provide feedback on my work presented here.<sup>7</sup>

Moreover, because social capital theory was not used in any previous EVOS research or other research on technological disasters, another limitation of this study is a lack of refined quantitative measures regarding social capital in the aftermath of technological disasters. My efforts to attempt to "retrofit" quantitative indicators not originally intended to measure social capital should be considered as descriptive, contextualizing, and thought provoking, rather than as an attempt to rigorously assess the absence or presence of social capital in Cordova following the EVOS.

### **7.7 Directions for Future Research**

My initial inquiries into social capital and social impacts of the EVOS on Cordova opened many proverbial doors, giving rise to additional questions that I will leave for future studies of my own and other researchers. Specifically, thinking about how various technological disaster concepts are related to social capital, I present a measurement model for consideration (See Figure 7.2) and possible use in future quantitative and qualitative research. This model incorporates existing measures of social

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<sup>7</sup> Following interviews and in subsequent communication with Cordovans since May 2003, many interviewees expressed an interest in reading my dissertation and discussing my findings with me.

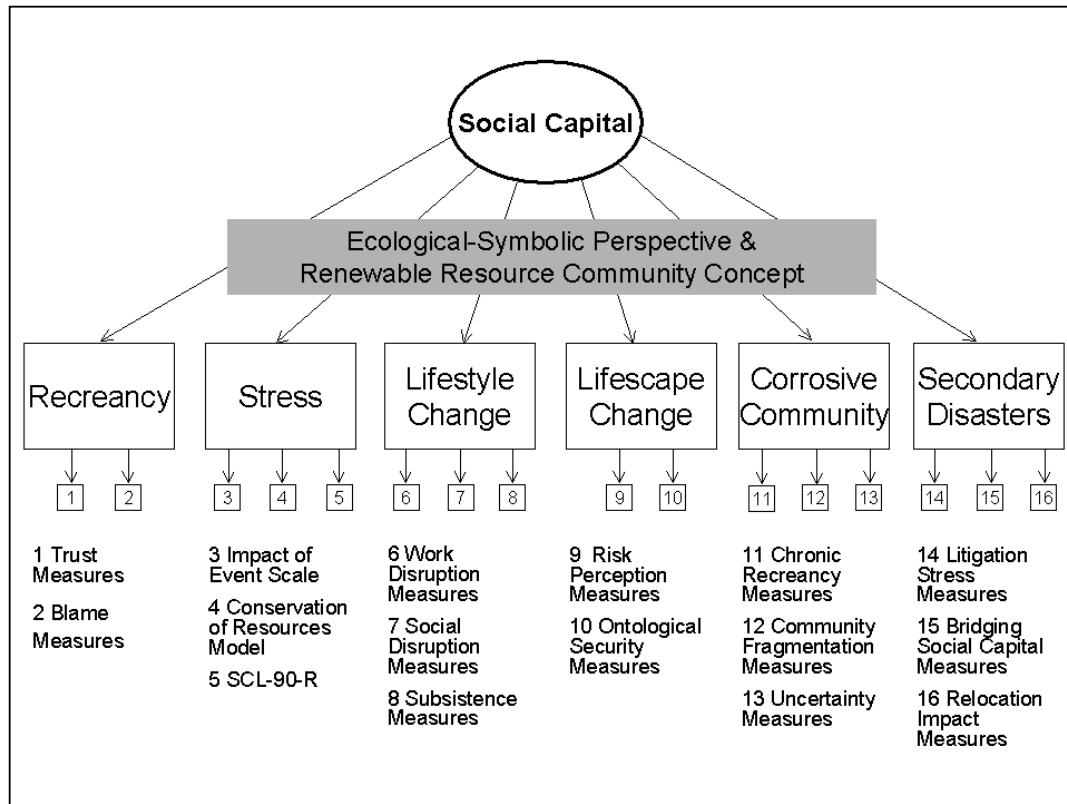


Figure 7.2 – Measurement Model for Social Capital and Technological Disaster Concepts

impacts of disasters, leaving opportunity to add items pertaining to different aspects of social capital.

Beyond this, I pose a number of questions. The first of my questions are specific to the community of Cordova:

(1) Although social capital in Cordova has diminished since the EVOS, is it possible that what the community is experiencing is a social capital “recession” that may be offset by investing social capital in the community? In other words, is

diminished social capital like an economic depression that can be countered by concerted strategies?

(2) Is it possible that social capital in Cordova just “looks” different since the EVOS – that once-familiar forms of social capital no longer exist in exactly the same way – and social capital is now emerging in new ways that have yet to be recognized?

My remaining queries are more general in nature:

(3) Are communities “rich” in social capital more strongly impacted by a loss of social capital than communities “poor” in social capital?

(4) Conversely, do communities that have limited social capital to begin with lose much with the demise of social capital – sort of an “it’s hard to miss what you never had” philosophy?

(5) Are there differences in how social capital should be operationalized in studying different types of communities (e.g., RRCs, non-RRCs, rural, urban)?

(6) Is it possible to apply social capital research in communities that have experienced technological disasters in ways that have potential to offset diminished social capital?

(7) To what extent does applying social capital theory to existing studies of natural disasters make comparisons between natural and technological disasters more reasonable or appropriate?

(8) To what extent does couching social impacts of technological disasters in terms of diminished social capital have policy implications for mitigation and remediation activities?

(9) To what extent does couching social impacts of technological disasters in terms of social capital have implications for building consensus and framing “community narratives” about social impacts of technological disasters?

My intellectual inquiries into social impacts of the EVOS on Cordova represent part of a larger tradition of research on technological disasters. Certainly, that is an important aspect of the work presented here. However, my academic work also reflects persistent questions among Cordovans who continue to live in a milieu of uncertainty that they recognize. It seems appropriate to honor their experiences, their lives, and their challenges by closing with a voice of Cordova:

I have thought a lot about [community recovery]. [Some] people think recovery is going back to the way it was before, which is not going to happen.... I am not sure what recovery would be. Whatever it is, it is something that has to be determined by consensus of the people. [We] will have to determine the recovery. I don't think any individual can determine what a recovery [for Cordova] will be. Whatever it is, it is going to be different [than before the spill].... Recovery is when ... your mind is cleared ... [when you can] look straight ahead and stop looking back. That is my idea of a recovery.... It is more of a psychological point [than an economic one], that is probably difficult for you to put your hand on and say 'This is the turning point.' There is just this sort of transition into it. To me, that is recovery. I don't know how else to put it, but that is the way that I look at it. I don't have the answers. I know I don't have any answers.... That is the biggest problem. I can't tell the answers. I don't even know what to think the answer is. I see too many variables.

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