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AN ETHNOGRAPHIC ANALYSIS OF THE IMPACTS OF TOURISM ON SOCIAL CAPITAL AND ADAPTIVE CAPACITY: INTEGRATING RESILIENCE AND DEVELOPMENT THEORIES

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ABSTRACT

The research seeks to holistically understand how tourism is influencing the community resilience of Petersburg, Alaska. Primarily inductive in nature, this ethnographic research is driven by questions revolving around 1) resiliency theory and the concept of adaptive capacity, 2) development theory and the concept of social capital, and 3) the potential integration of these two theoretical perspectives. This work also deductively considers several theoretically derived hypothetical statements derived from the literature on these concepts. The analysis integrates data gathered via ethnographic methods of participant observation, archival research, and interviews designed to capture emic view of key community-level informants. Purposive sampling on the basis of high levels of cultural expertise yielded data from individuals of diverse demographics within the community, permitting a broad, idiographic understanding of the ways that tourism influences social capital, social adaptive capacity, and thus decision-making processes regarding tourism development within the community. This analysis suggests that social capital is an important antecedent for the types of effective actions needed to increase adaptive capacity. Furthermore, the findings indicate that integration of social capital and adaptive capacity is necessary for identifying the most sustainable pathways forward for tourism development in communities. In this regard, a social capital accounts for the social components of adaptive capacity, where the integration of both concepts illuminates what actions are not only feasible, but what actions are likely to yield sustainable development outcomes. By answering the research questions posed, this thesis provides many opportunities for other scholars to integrate social capital and adaptive capacity in the analysis of tourism-related socio-ecological resiliency and sustainable community development.

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MAXQDA	MAX Qualitative Data Analysis Software
PA	Protected Area
TNF	Tongass National Forest
USFS	United States Forest Service
ICIK	Interinstitutional Center for Indigenous Knowledge
AMHFS	Alaska Marine Highway Ferry System
SES	Social-Ecological System

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Chapter 1.

INTRODUCTION

The thesis will address the vulnerability and resiliency of coastal communities experiencing global environmental change. A particular focus of this thesis is the ways that tourism influences the ability of local communities to achieve resilient and sustainable development outcomes. To address the role that tourism plays in these communities, a social-ecological systems (SES) approach is established by theoretical framing originating in the broader resilience literature. A point of emphasis in this thesis is the ways that tourism influences the adaptive capacity of local communities. To assess sustainable development outcomes attributed to tourism, additional theoretical framing is integrated from development theory, in this case focusing on forms of social capital. This provides insights into the necessary social conditions that enable adaptive capacity for communities. These issues are all explored in the context of cruise tourism development along the coasts of Southeast Alaska.

Global Systemic Change in Coastal Communities

The sustainability of the coastal communities around the globe is threatened due to systemic changes in climate resulting in warmer temperatures, changed precipitation patterns, and more extreme weather events (Pachauri et al., 2014). Coastal community sustainability is especially vulnerable to rising ocean temperature, ocean acidification, changing seasons, and severe weather (Bennett, Dearden, Murray, & Kadfak, 2014). These changes impact the community, livelihoods within the community, and upon the ecosystems of which they both depend (Marshall et al., 2010). Eighty percent of tourism globally, occurs within coastal areas, therefore climate change will continue to test tourism dependent coastal communities around

the globe (Wyss, Abegg, & Luthe, 2014). While there is a myriad of drivers of global systemic environmental change originating from local to global scales, the localized impacts are felt in coastal communities around the world. This research will focus on these local impacts as well as address the feasibility of tourism as an intervention mechanism to improve SES resilience.

As tourism is also frequently dependent upon sustainable use of natural resources, it can be seen as an opportunity to provide balance between the natural environment and attaining socio-economic benefits (Heslinga, Groote, & Vanclay, 2017). However, sustainable tourism literature has only tentatively embraced the advances made in the field of SESs, resiliency, and broader sustainability sciences (Becken, 2013; Turner, 2010). When the tourism literature has adopted SES in coastal areas, the emphasis is generally on the increasing magnitude and frequency of climate change and the impact it will have on community resilience (Ferro-Azcona et al., 2019). This approach focuses on how tourism will be impacted, rather than how tourism itself creates socio-economic and environmental impacts. The latter is addressed in this research where an SES approach is used to define community as the unit of analysis. As such, a community is composed of social elements nested within the environmental system that allows for the analysis of how tourism influences human-environmental relations. Coastal communities are likely to be more resilient when they can minimize the negative social and economic impacts associated with climate change while also maximizing the positive socio-economic opportunities that tourism provides (Marshall et al., 2010). Further exploratory research that seeks an idiographic understanding of the multi-dimensional ways that tourism influences community resilience and sustainable development remains desperately needed (Becken, 2013).

In more recent writings on resilience, there has been a reconceptualization of the

role of local communities in natural resource management, with greater recognition of the need to incorporate local stakeholders and what could be called emic views (Ferro-Azcona et al., 2019). Emic views are described as the native point of view or the perspective of those being researched rather than the perspective of those doing the research. As local residents are the ones most influenced by tourism impacts, understanding their behavior, perceptions, social organization, and adaptive behaviors is necessary for determining both how tourism is currently impacting destination communities and also how it could be better managed for more favorable outcomes in the future (Hwang, Stewart, & Ko, 2012). This concept is defined as adaptive capacity or the actions that allow people to anticipate and respond to change, minimize consequences, and take benefit from new opportunities (McClanahan & Cinner, 2012). Thus, understanding the social precedents of adaptive behaviors will provide much in the way of insight into how tourism promotes sustainable development (Lee, 2013). One potential precedent known to be influential on sustainable development outcomes in rural settings is the presence of social capital (Hunt, Durham, & Menke, 2015). In this research, social capital is defined as the social ties in which individuals gain access to power and resources. A lack of social capital has been characterized as a bottleneck for sustainable development (Bebbington, 1999). Social capital can be a critical antecedent of the collective action necessary to enable effective environmental management by fostering the creation of social networks and information flows between individuals and institutions (Adger, 2003). Exploring social capital may therefore be essential to understanding how tourism may enable, or conflict with, local institutions in their efforts to negotiate tourism-related opportunities in ways that promote local community wellbeing (Jordan, Vogt, Kruger, & Grewe, 2013).

The Southeast Alaskan Context

Internal and externally imposed governance structures, intertwined with a growing cruise tourism sector, has now become a quintessential characteristic of contemporary life in Southeast Alaska. While the Forest Service manages 80% of the land in Southeast Alaska, the remaining 20% is divided among diverse entities such as the National Park Service, State of Alaska, local governments, and private owners (Kruger, 2005). The Forest Service's 80% is almost entirely accounted for by the Tongass National Forest (TNF). TNF is the largest temperate rainforest in the world. The resources of this rainforest draw tourists from around the globe to its natural beauty. Visitors come via land and water to see dramatic scenery, and in the process are also exposed to the rich cultural heritages present in the region's communities (Adams, 2010; Bunten, 2014; Kruger, 2005). The collection of islands along the southeastern coast of Alaska exhibit unique biophysical characteristics, which are in turn reflected in the cultural uniqueness of these communities through traditional – and evolving -- livelihood practices (Nie, 2006).

In rural communities of southeast Alaska, it is widely believed that natural resource wealth is, “one of the few means through which a vital economy can be constructed in Alaska is through the extraction of its natural resources” (Sherval, 2009, p. 427). However, natural resource economies have proven vulnerable to boom-bust cycles. In the past decades, regional communities have increasingly transitioned to at least some integration with service sector economies like outdoor recreation and tourism. As extractive, natural resource industries decline in Southeast Alaska, both tourism and unemployment assistance have become more prominent in local household economies, instigating a significant change for many communities (Cerveny, 2004). In an effort to negotiate these changes in ways that preserve

community fabric and collective identity, managers and policymakers are forced to carefully consider the nature and magnitude of tourism they are willing to allow in their region (Kruger & Mazza, 2006). One of the most powerful influences, the large-scale cruise tourism industry, is placing pressure on small coastal communities in Southeast Alaska to serve as ports of call (Adams, 2010), yet it remains unclear if such forms of tourism are what would yield the most resilient and sustainable development outcomes over time for these communities.

Study Purpose

This purpose of this study is to holistically understand how tourism is influencing the community resilience of Petersburg, Alaska? The objective of the research is to gain an emic and idiographic understanding of the ways that communities integrate tourism-related opportunities and challenges into community resilience. As such, the overall research design here is ethnographic in nature. The lack of nuanced theoretical integration of concepts of adaptive capacity and social capital into tourism studies warrants a more inductive and exploratory approach. Furthermore, the ethnographic approach will yield an understanding of local, emic views of how tourism is influencing the community of Petersburg, Alaska, as well as the historical processes of community transition and adaptation that continue to influence social organization and decision-making to this day.

While primarily inductive in nature, this work will also deductively consider several theoretically derived hypothetical statements. These research explorations revolve around 1) resiliency theory and the concept of adaptive capacity, 2) development theory and the concept of social capital, and 3) the potential integration of these two theoretical perspectives. In the process of answering these inquiries, this thesis provides a holistic understanding of what

opportunities for adaptive capacity are available to Southeast Alaska residents through their existing social arrangements, and thus how they are negotiating tourism-related opportunities to foster resilient and sustainable community development.

Chapter 2.

LITERATURE REVIEW

This study addresses tourism's influence on socio-ecological resiliency and adaptive capacity of rural coastal communities in Southeast Alaska. The origins of resilience and vulnerability theory are addressed, focusing on the inherent link of capacity of response and adaptive capacity. The social elements of adaptive capacity are further assessed including social capital which stems from the field of development studies. Using the "network" view of social capital; bonding, bridging, and linking forms of social capital are assessed. Literature focusing on the community scale will be prioritized within each theory. Finally, specific research questions with accompanying hypothetical statements are proposed addressing theoretical insights produced from review of these two bodies of literature. These questions and hypothesis will drive the methodological design of the study, presentation of ethnographic findings, and theoretical discussion.

Part I: Resilience of What to What?

Originating in ecology, resilience is a transdisciplinary concept being applied in psychology, engineering, and the social sciences to address different systems such as the environment, communities, organizations, and industries (Bec, McLennan, & Moyle, 2016). Holling (1973) introduced the concept to understand and measure the capacity of ecological systems to persist in their original state when disturbed. The concept is rooted in the idea of ecological system but has since included social systems. Within the sociological discipline, Adger (2000) defines resilience as the ability of communities to adapt to external disturbances towards a more desirable trajectory (Adger, 2000). While in socio-ecology, resilience is the

ability of the system to self-organize and learn in the face of change (Berkes, Colding, & Folke, 2003). The socio-ecological approach of resilience highlights that societies and cultures are embedded within the biosphere and shape ecosystems from local to global scales from past to the future (Folke, 2016). Additionally, there is a continued need for an epistemological shift to include political, historical and cultural meaning inherent within social science disciplines (Cote & Nightingale, 2012). This study will use the definition of resilience as given by Folke et al. (2010) where resilience is the capacity of a system to absorb a disturbance while retaining the same function, structure and feedback, and identity.

There have been a multiple of approaches and accompanying definitions for exploring resilience which could have been used in this study. Social resilience is seen as modifications to behavior or to social frameworks that structure and give meaning to behavior (Hall & Lamont, 2013). Cultural resilience is the characteristics of socio-ecological systems that endure despite changes of other elements, therefore supporting the perseverance of the systems identity (Forbes, 2013). Development resilience is the capacity over time of a person or household to avoid poverty in the face of various stressors and shocks (Barrett & Constas, 2014). As this is an exploratory and inductive study, the operational definition of resilience used here was intentionally broad in order to gain a holistic understanding of both environmental and social systems to understand the identity of the system.

Socio-ecological resilience is a resilience interpretation that has effectively incorporated the concepts of ***adaptive capacity*** and ***vulnerability*** (Folke, 2006; Gallopín, 2006). A systematic review by Gallopín (2006) demonstrates that resilience, vulnerability, and adaptive capacity are distinctively different concepts yet inherently connected. Vulnerability is defined as the susceptibility to harm from exposure to environmental and social change and the absence of

the capacity to adapt (Adger, 2006). Vulnerability is also a transdisciplinary concept, but in the area of human environment relationships where vulnerability has foundations in social-ecological systems, vulnerability is the degree to which the system is affected by a system's exposure or sensitivity (Adger, 2006; Gallopín, 2006). Vulnerability is described as having three inter-related components of exposure, sensitivity, and adaptive capacity. Exposure is the extent the system is *stressed* by the environment where sensitivity is the degree to which the stress *affects* a system (Cinner et al., 2013). A system can therefore have a high degree of exposure but exhibits no change due to low sensitivity. A highly sensitive system in contrast will be modified with only a small amount of exposure. There is both biological and social sensitivity. Social sensitivity may be impacted by conditions such as natural resource dependency or social marginalization of individuals (Adger, 2006; Cinner et al., 2013). Community level vulnerability is related to the exposures and sensitivity of communities and the adaptive capacity of those communities to mitigate those risks. These local level attributes of vulnerability are reflective of larger drivers of change (Smit & Wandel, 2006).

Adaptive capacity has been considered a uniting element between resilience and vulnerability, where adaptive capacity is often cited as capacity of response or the ability to achieve desired states (Engle, 2011). Adaptation is the process of deliberate change either in anticipation or in reaction to stress and has significant overlap with resilience thinking (Folke, 2016; Nelson, Adger, & Brown, 2007). Time is central to both concepts as system exposure and sensitivity can change and is embedded within the process of achieving a desirable state (Bec et al., 2016). At the community scale, adaptive capacity is related to the networks and associations that strengthen or undermine institutions (Folke, 2006). In a review of agency, adaptive capacity, and resilience; Brown and Westaway (2011) find that the central concepts of resilience thinking

are shifting from quantifiable indicators to a more nuanced view of being comprised of objective, subjective, and relational aspects that address capacities and cross-scale perspectives (Brown & Westaway, 2011; Folke, 2016). Nevertheless, when adaptive capacity is measured, a specific scale or shock is often used (Cinner et al., 2013).

The socio-ecological interpretation of resilience has allowed the concept to be applied to the community scale. The institutional approach used here is valuable to community resilience, as communities are heterogenous entities (Agrawal & Gibson, 1999). There are two competing bodies of literature in community resilience with one addressing sudden rapid change while the other addresses a systems perspective exploring the socio-ecological resilience of community systems (Bec et al., 2016). The former has been criticized for limited effectiveness due to the complexity of community systems, and creating specified resilience which could cause resilient systems to be more vulnerable (Adger, 2006; Bec et al., 2016; Cote & Nightingale, 2012; Folke et al., 2010). Community resilience here is defined as the "existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise" (Magis, 2010, p. 401). Therefore, a community is integrated into the socio-ecological system which is not invulnerable to change, but has the ability to manage the impacts and outcomes (Bec et al., 2016).

Multiple gaps and applications must be addressed when determining a communities' resilience. Within social systems resilience research, a socio-ecological approach is necessary as community resilience and ecological sustainability are tied to the interconnectedness of humans and ecological systems (Magis, 2010). Institutions and the governance structure of a community must also be considered as policy impacting resilience can stem from local, regional, state, and federal institutions (Duit, Galaz, Eckerberg, & Ebbesson, 2010). Finally, in a review of existing

knowledge on community resilience, there is a need for literature addressing a community response to long-term structural change such as tourism (Bec et al., 2016).

Social Adaptive Capacity

Studies have focused on the influence of economic and physical factors in community resilience, but few studies have addressed social factors on community resilience (Guo, Zhang, Zhang, & Zheng, 2018). This can be seen through competing definitions of adaptive capacity. One that is a precondition of a system focused on the ability to adjust to a disturbance, minimize harm, utilize new opportunities, and cope with consequences of a transformation (Gallopín, 2006). Other definitions are more socially focused acknowledging management and other human actions to improve resilience; referring to conditions that enable people to anticipate and respond to change, minimize harm, and take advantage of new opportunities (Adger & Vincent, 2005; McClanahan et al., 2008) This approach to adaptive capacity has been defined as ***social adaptive capacity*** or a measure of social resilience to reduce vulnerability of individuals, social institutions, and communities to system shocks and stresses (Bennett et al., 2014). The operational definition embracing the social components of adaptive capacity used here is given by McClanahan and Cinner (2012, p. 72), who define adaptive capacity as, "the conditions that enable people to (1) anticipate and respond to change, (2) minimize and recover from the consequences of change, and (3) take advantage of new opportunities."

The majority of studies focusing on the social elements adaptive capacity have focused on the coastal and fishing communities. The studies either emphasize the ability of communities to adapt to change or analyze a suite of indicators to determine overall adaptive capacity (Bennett et al., 2014). However, a limitation of an indicators approach to adaptive

capacity is that limited insight is gained from temporal understandings of adaptation strategies (Smit & Wandel, 2006). The previous adaptive capacity strategies employed by individuals or communities may not maintain social-ecological resilience in systems characterized by increasing complexity and rapid change (Armitage & Johnson, 2006). The community ability approach instead focuses on local conditions and institutions that would catalyze or inhibit future adaptation to either social or ecological change (Bennett et al., 2014). As resilience research addressing social adaptive capacity exists outside of tourism and given the diversity of assessment, an exploratory community ability approach addressing social adaptive capacity is adopted here.

No one set of indicators have been developed for social adaptive capacity. Ohlsson (1998, 1999) was the first to coin the term social adaptive capacity using the Human Development Index as a proxy for social adaptive capacity at a country scale (Ohlsson, 2000). In Cinner et al. (2013), eight indicators were used for social adaptive capacity including human agency, access to credit, occupational mobility and multiplicity, social capital, material style of life, gear diversity, community infrastructure, trust, capacity to change, and debt. Bennett et al. (2014) used 26 indicators that were categorized into four dimensions of adaptive capacity of flexibility and diversity, capacity to organize, learning and knowledge, and access to assets as proposed by Folke, Colding, & Berkes (2003). Maina et al. (2016) uses 16 social indicators grouped into six key dimensions of situation awareness, climate change risk perceptions, current adaptation options, role of non-state actors, fishing as a livelihood activity, and governance of climate change adaptation. Most recently Ferro-Azcona et al. (2019) use an social adaptive capacity index that includes an evaluation of social capital, occupational mobility, anticipation of change, material assets, and technology.

These frameworks enabled comparability but are limited in scope given the complexity of social adaptive capacity as well as social capital, which will be elaborated in the second half of this literature review. Furthermore, measures are highly variable; such as social capital being addressed through one measure (Cinner et al., 2013), five measures (Diedrich, Stoeckl, Gurney, Esparon, & Pollnac, 2017), and eleven measures addressing two of three scales of social capital (Bennett et al., 2014). Given the amount of diversity in current analysis of social adaptive capacity and the paucity of literature that exists within tourism. A clear research gap exists in the development of social adaptive capacity indicators within a tourism context.

Resilience and Tourism Studies

While the social adaptive capacity has been addressed in global environmental change and in coastal fishing communities, the concept has not been addressed thoroughly in other types of anthropogenic change, such as those resulting from development opportunities. Despite the implications that tourism has on resilience and accompanying adaptive capacity, tourism researchers have only recently explored resilience concepts (Espiner & Becken, 2014; Guo et al., 2018; Ruiz-Ballesteros, 2011; Strickland-Munro, Allison, & Moore, 2010). Tourism research that has addressed resilience is largely conceptual, qualitative in nature, and many do not include the community in its entirety (Bec et al., 2016). Empirical analysis is lacking for the factors of community resilience in tourism destinations (Biggs, Hicks, Cinner, & Hall, 2015), leaving us with little knowledge of how vulnerability drivers in destinations can ultimately be overcome to create resilience-building solutions (Calgaro, Lloyd, & Dominey-Howes, 2014). Calgaro et al. (2014) states that there are few rigorous frameworks to guide assessment of destination resilience and proposes the Destination Sustainability Framework that re-emphasizes the concept of place,

contextualized influences, and reconceptualizing scale and temporality of resilience. Bec et al. (2016) proposes a resilience framework for long term structural change to address community resilience. Community resilience to structural economic change by tourism is critical as tourism development can have impacts on structure and cohesion of a community. Current concepts in resilience emphasize the need for objective, subjective, and relational aspects that address capacities and cross-scale capacities (Brown & Westaway, 2011), thus these frameworks provide an excellent starting ground for analysis.

There is continued need for an epistemological shift to include political, historical and cultural meaning to capture the more nuanced view of resilience thinking integrating objective, subjective, and relational aspects (Brown & Westaway, 2011; Cote & Nightingale, 2012). While resilience has been addressed in global environmental change and coastal geographies, resilience concepts have only begun to be addressed within tourism research (Bec et al., 2016; Guo et al., 2018; Ruiz-Ballesteros, 2011). Resiliency and vulnerability at the community scale are related to exposure and sensitivity of communities and the adaptive capacity to mitigate risks (Smit & Wandel, 2006). Furthermore, communities are nested within regional, state, and federal institutions impacting the adaptive capacity of institutions and governance structure at the local level (Duit et al., 2010). Thus, an exploratory community ability approach is adopted here to holistically assess social adaptive capacity.

Part II: Social Capital and Sustainable (Tourism) Development

The term capital refers to any resources or assets that social actors (e.g. individuals, groups, governments, and nation-states) use to reach their goals (Bourdieu, 1986; Dahl, 1957; Stokols, Lejano, & Hipp, 2013). The inclusion of various types of capital differs depending on

the framework being used, yet all capital takes time to accumulate and can change into different forms of capital (Bourdieu, 1986). To continue, regardless of the type of capital, the transition from one form of capital to another cannot be assumed to automatically be an equal ratio, as it is mediated by institutions and social relations (Ellis, 1998). Notable capital frameworks include Bebbington (1999) incorporation of five types of capitals into the Capitals and Capabilities Framework and Community Capitals Framework by Flora, Flora and colleagues' (2004) using 7 capitals. Each capital has unique bodies of literature and origins. However, social capital has been described as the 'the missing link' in development, as it accounts for the way individuals interact and organize themselves to develop and grow (Grootaert, 1998). Social capital is measured in a variety of ways including cognitive and behavioral, communitarian and institutional, and networked versus individual.

Social capital has been conceptualized in a variety of perspectives. Harpham, Grant, and Thomas (2002) differentiate between structural and cognitive social capital. Where the behavior of individuals defined as structural social capital, while cognitive social capital focuses on individual perceptions. An advantage of this approach to social capital is that regardless of constraints to participation or behavior, all individuals possess perceptions of trust, reciprocity, and cooperation in their local community (McGehee, Lee, O'Bannon, & Perdue, 2010). These elements of perception are closely associated with the communitarian approach that addresses trusts, norms, and reciprocity (Coleman, 1988; Putnam, 2000). However, there are commonalities within all approaches such as trust (Nooteboom, 2007). Furthermore, evidence under any approach suggests social impact can impact development outcomes through information sharing, coordination of activities, and decision making (Grootaert, 1998).

The network view, used here, allows scholars to focus on each category of social ties to analyze local vulnerability and resilience conditions (Kyne & Aldrich, 2019). Thus, this study is grounded in the sociological ***network perspective*** of social capital which is "the set of norms, networks, and organizations through which people gain access to power and resources, and through which decision making and policy formulation occur" (Grootaert, 1998, p.2; McGehee et al., 2010). The networks that constitute the social system, enable or disable the mobilization of potential resources and facilitate connections with key actors in positions of power (Bourdieu, 1986; Hunt et al., 2015; Onyx, Edwards, & Bullen, 2014; Szreter & Woolcock, 2004). Thus, it is the network that defines the amount of potential resources within a social system (Bourdieu, 1986), which can be used for people to facilitate action (Putnam, 2000).

Bonds & Bridges in Social Capital

In the network approach of social capital, social capital is differentiated between the types: bonding, bridging, and linking capital (Gittell & Vidal, 1998; Woolcock & Narayan, 2000). Bonding capital signifies the ties connecting individuals within a network who are similar in some form (Putnam, 2000). Individuals within the network see themselves as being alike creating trust and cooperation among members of the network (Szreter & Woolcock, 2004). Bonding capital creates strong localized feeling of belonging, where the strength of the bonds determines how and if resources move in a network (Onyx et al., 2014; Smith, Moore, Anderson, & Siderelis, 2012). Bonding capital is the most common form of social capital. Bonding capital can facilitate tourism-related information to be circulated within a community allowing information to be shared quickly among network members. Furthermore, this information can lead to a coherent voice necessary for collective action for tourism development (Hwang &

Stewart, 2017). Yet, bonding capital can also be used to set boundary conditions disempowering those who wish to gain access to the group, creating intolerant communities (Onyx et al., 2014). Thus, bonding capital can be a powerful tool for both empowerment and disempowerment by regulating how and if resources move within a network.

Bridging capital represents the social ties between individuals that exists in multiple networks regulating interactions between communities. Bridging social capital connects multiple networks or institutions, thus these social ties characterize people belonging to multiple networks of members who see themselves as similar (Onyx et al., 2014). There are inherently fewer social ties between members or institutions as this scale. In contrast of bonding capital being formed between individuals who see themselves as similar, bridging social capital is regulated by respect and affinity between people of differing socio-demographics and can provide novel information outside the network (Aldrich & Meyer, 2015). The forming of bridging capital between members of different networks or communities allows for the exposure of new social ties that increase resource availability not otherwise available (Szreter & Woolcock, 2004; Woolcock, 2001). Community bridging capital allows new sources of funds, expertise, and information to be accessed towards developing tourism opportunities (Macbeth, Carson, & Northcote, 2004). Yet, bridging capital are less in number than bonding capital and those who control the enabling features of these ties can create a powerful tool for oppression (Onyx et al., 2014).

Linking to Power via Social Capital

Linking capital addresses the social ties of those who not only exists outside of a member's network but also addresses individuals or networks who reside at different power levels. Therefore, they are conceptualized as vertical connections to networks residing outside

community (Onyx et al., 2014). Social ties characterizing linking capital are not between members who see themselves as being similar like bonding capital, nor do they differ in social identity like bridging capital, but differ in resources and information availability (Szreter & Woolcock, 2004). In resource potential, linking social capital is the most powerful but constitutes the fewest number of ties (Hawkins, Maurer, Hawkins, & Maurer, 2010). Linking capital is built through norms of respect and trust as the members of higher power institutions provide key resources that require face-to-face interaction (Szreter & Woolcock, 2004). However, linking capital can have insidious qualities as the obligations inherently within power structure can reinforce the dominant party (Onyx et al., 2014). The reliance on linking capital can degrade bridging and bonding capital that exists at the community level, and thus can lead to widening power relations through corruption and suppression (Szreter & Woolcock, 2004).

Commonalities exists within all forms of social capital. Though power is explicit within linking capital, power is intrinsic to all forms of social capital as power relations exists between communities and within communities. Those members can who can access resources not available in the community have the ability to set boundary conditions creating sources of power (Onyx et al., 2014). Trust is also seen as a core component of social capital (Moscardo, Konovalov, Murphy, McGehee, & Schurmann, 2017). Trust is both an outcome and antecedent of social ties as it is the basis for generating social capital. Trust can only be formed through time and requires continual investment and cultivation (Nooteboom, 2007). With trust, members no longer have to invest in monitoring behavior of others, creating easier movement of resources in the network (Jones, 2005). Thus, increasing trust has been shown to increase the effectiveness of collective action (McGehee et al., 2010). As simply stated by Hwang & Stewart (2017, p. 83),

"without trust, networks are likely to remain a form of acquaintanceship." Thus, power and trust must be accounted for in each of the three structural levels of social capital.

The Relationship Between Tourism and Social Capital

While not a new concept, social capital is relatively recent in its application to tourism development (McGehee et al., 2010). Sustainable tourism development can enhance social capital, while fostering beneficial economic development for livelihoods in natural resource based communities (Biggs et al., 2015; Macbeth et al., 2004). Social capital at the community level can be organized into two categories of how tourism business benefit from existing social capital within the community and those that consider the impacts of tourism on social capital (Moscardo et al., 2017). The impacts of tourism on social capital are of particular importance to this study. In addressing the role of trust and reciprocity through cognitive and structural social capital, Jones (2005) emphasized the role of social norms in residents' perception of favorable tourism outcomes. Social capital can facilitate the creation of social norms through ideas and values of tourism related information (Hwang & Stewart, 2017). In addressing the need for understanding residents perceptions to tourism development, Park, Nunkoo, and Yoon (2015) found that high levels of social capital does not foster pro-tourism attitudes if tourism is poorly managed. Using the network view, Hunt et al. (2015) stresses the need to connect external actors to local context through bridging and linking social capital to address tourism management and other development bottlenecks. High social capital within the community can create a collective identity and strong sense of community which enables collective action (McGehee & Santos, 2005). Collective action is key for successful tourism destinations to engage in decision making

that represents community goals through the development of a cohesive tourism product (McGehee et al., 2010).

The impacts of tourism on social capital have not been thoroughly addressed (Moscardo et al., 2017). The network perspective used here is composed of bonding, bridging, and linking forms of social capital. At each scale, successful mobilization of social capital should result in increased opportunities for individuals to gain access to resources that can be used to facilitate decision-making and policy formulation (Grootaert, 1998). Elements of trust should be analyzed as it is inherent in all forms of social capital (Nooteboom, 2007); as such, high levels of trust should result in behavior consistent with social norms and easier movement of resources (Jones, 2005). Furthermore, if there are increased social ties to individuals in separate networks or who differ in resources, possible benefits are information sharing, coordination, and collective decision making (Grootaert, 1998). The resulting tourism product resulting from increased opportunities through social capital should result in a tourism product reflective of the collective identity of the community (McGehee et al., 2010).

The network perspective of social capital allows for the analysis of local vulnerability and resilience conditions (Kyne & Aldrich, 2019). However, social adaptive capacity has largely been assessed in coastal fishing communities in relation to global environmental change. Furthermore, the inclusion of social capital as an indicator of adaptive capacity is not standard and when included, is measured in a myriad of ways. Thus, little is known about the relationship between social capital and social adaptive capacity, especially when assessing the impact of tourism on community resilience. The concepts have different disciplinary origins, but more research is needed to see if the ideas are distinct yet overlap similar to the convergence of adaptive capacity uniting the concept of resilience and vulnerability.

Part III: Context for Research Questions and Hypotheses

This thesis is guided by the overarching question of *how tourism is influencing the community resiliency of Petersburg, Alaska?* An effort to answer this question has led to a review of the literature on resiliency very broadly, as well as community resiliency more specifically. In particular, the notion of social adaptive capacity has been identified as a topic of promise for understanding resiliency outcomes in communities. While resiliency perspectives have been brought to bear on recent analysis in tourism studies, the social adaptive capacity concept remains unexplored. Likewise, only recently has social capital been adopted into the social adaptive capacity literature (Cinner et al., 2013; Ferro-Azcona et al., 2019; Maina et al., 2016). There is also negligible understanding of the drivers of destination resilience of vulnerability (Calgaro et al., 2014). Thus, while social capital has been applied to the new concept of social adaptive capacity, can social capital be used to elucidate drivers of resilience in tourism concepts? Furthermore, there remains a gap in the literature specifically focusing on tourism-related social capital as the structural forms of social capital have different roles in community development (McGehee et al., 2010). Guo et al. (2018) state that there is a significant gap in the literature in the use of social capital to understand community resilience and successfully applied the network view of social capital to address community resilience. However, they address disaster recovery of a tourism destination in China which may not be generalizable to other cultural context (Guo et al., 2018). Thus, there are significant gaps in literature addressing community resilience and the ability of social capital as a conceptual tool to address these gaps.

Being absent in the literature on sustainable tourism development, a focus on the social adaptive capacity concept here provides the opportunity to create greater engagement of

tourism studies with concepts emerging from larger body of resiliency literature. In short, without social adaptive capacity, community resiliency is unlikely. The first research question articulated below thus centers largely on this concept. Three hypotheses are derived from the literature addressing each component of the resilience analysis: 1) addressing exposure defined as shocks or stressors originating from outside the system to which the local community cannot change, 2) sensitivity or degree to which the system is likely to change in response to a disturbance. Finally, 3) adaptive capacity is analyzed or the conditions that enable people to anticipate change, minimize consequences of change, and take advantage of new opportunities. As much as social adaptive capacity may be essentially for community resiliency, social capital has been described as being the missing link for sustainable development, and it must therefore also be a missing link for sustainable *tourism* development. The second research question here revolves around the role that social capital plays in the sustainable community development of Petersburg, Alaska. Adopting the network perspective on social capital, several hypothetical outcomes related to bonding, bridging, and linking forms of social capital are explored. Each hypothetical statement surrounding research question one and two are organized by first addressing elements residing outside of Petersburg then addressing elements within the community.

Finally, this thesis engages in the question regarding the relationship between the concepts of social adaptive capacity and social capital, focusing on ways that tourism might influence these qualities. The final research question here therefore asks, *are these really the same underlying concepts or do they remain distinct in their contributions to our understanding of how tourism influences sustainable tourism development?* Given the lack of attention to resilience and social capital in tourism studies, and the absence of attention to social adaptive

capacity, this final question is timely for determining the extent to which these two concepts address the same underlying concepts, or if they are indeed distinct enough to warrant consistent differentiation in future studies of tourism impact on community resiliency and sustainable development.

With these issues in mind, the following research questions and hypothesis are explored in the remainder of this thesis:

Research Question #1 (RQ1): Does tourism affect the *resilience* of rural Alaskan communities in the face of systemic environmental change?

H1a: If tourism increases community resilience, we would expect to find evidence of reduced exposure to systemic environmental change

H1b: If tourism increases community resilience, we would expect to find evidence of reduced sensitivity to systemic environmental change

H1c: If tourism increases community resilience, we would expect to find evidence of increased adaptive capacity in the face of systemic environmental change

Research Question #2 (RQ2): Does tourism promote the *social capital* that is required for the community to achieve broader sustainable development outcomes?

H2a: If tourism is promoting favorable community development outcomes, we would expect to see evidence of increased value resulting from better connections to key actors in positions of power (e.g., linking forms of social capital)

H2b: If tourism is promoting favorable community development outcomes, we would expect to see evidence of increased value arising from interactions with other communities in the region (e.g., bridging forms of social capital)

H2c: If tourism is promoting favorable community development outcomes, we would expect to see evidence of more local engagement in development decision-making within Petersburg (e.g., bonding forms of social capital)

Research Question #3 (RQ3): Is social capital a suitable proxy for assessing adaptive capacity, or do both concepts need to be retained in discussions of sustainable tourism development?

This final question is entirely exploratory. There simply is not enough literature to establish any hypothetical statement regarding this relationship, thus none have been elaborated here.

Given a general lack of research on these concepts in the field of tourism studies, and in particular, an absence of any quantified measures of either social adaptive capacity or social capital, research examining these concepts would continue to benefit from exploratory, inductive approaches that seek broader, idiographic understandings of how the expectations created by theoretically informed, etic ideas compare and contrast with the observed, emic views of rural Alaskan residents experiencing shifts to livelihoods and ways of being as result of new forms of tourism emerging in this region in recent decades. Ethnographic research is particularly well-suited to serving this purpose (Creswell, 2007), and this research method was thus implemented in this study. The following chapter describes in detail the research design, data collection, and analysis activities associated with this ethnographic approach.

Chapter 3.

STUDY METHODS

This discussion of the study methods is split into four sections. The first section addresses the research context, focusing on how this research site is suitable to address the research questions. The second section will introduce the research design and explain why it is best suited to answer this study's research questions. The next section will describe the various approaches to sampling and data collection techniques that will facilitate triangulation during data analysis. The final section will discuss the analysis plan and the software used to organize the analysis.

Study Site

Southeast Alaska is a vast archipelago consisting of thousands of islands and glacially carved fjords inhabited by a diverse population of Indigenous and European descendants. The region is characterized by complex histories and livelihoods that are based on the residents' relationship with their natural environment. While the Forest Service manages 80% of the land in Southeast Alaska, the remaining 20% is divided among the National Park Service, State of Alaska, local governments, and private owners (Kruger, 2005). That eighty percent is almost entirely accounted for by the Tongass National Forest (TNF), the largest temperate rainforest in the world. The collection of islands along the southeastern coast of Alaska exhibit unique biophysical characteristics, which are reflected in the cultural uniqueness of the residents and their traditional – and evolving -- livelihood practices (Nie, 2006).

The region's largest private industry is fishing and seafood processing, but has shown recent decline because of a variety of reason including not limited to commercial farming and

competition of global markets for salmon (Gilerbston, 2003; Kruger, 2005). The region was heavily influenced by the pulp mill era of logging, but the scale of the industry has seen a drastic decline prior to the turn of the century and is now concentrated in the regional cities of Ketchikan and Sitka. However, as nearly all communities reside inside or directly against the TNF, forestry still constitutes a large influence on residents regardless if they are employed in forestry or not (Kruger, 2005). Resource dependent communities are in state of transition, where resource extractive industries are in decline while tourism and unearned income are starting to dominate local economies (Cerveny, 2007).

Figure 1. Map of Southeast Alaska showcasing Tongass National Forest. Source: https://www.fs.usda.gov/detail/tongass/specialplaces/?cid=stelprdb5393510

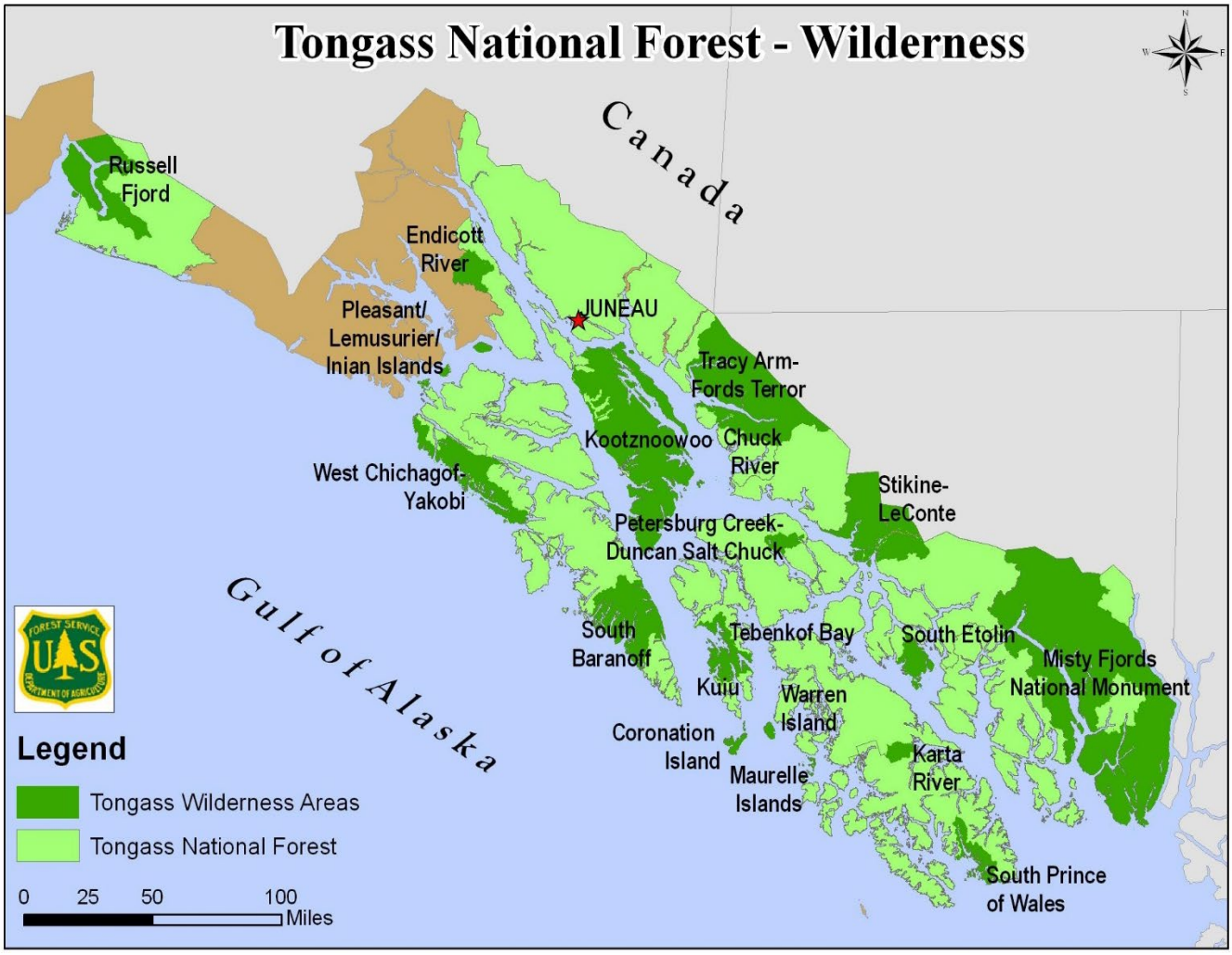

Figure 2. Map of Petersburg Borough Source: *Petersburg Borough Comprehensive Plan* (2016)

The tourism industry represents one of the largest industries in Southeast Alaska. The tourism industry in the region is built on Alaska's natural beauty, where tourists from across the globe come to see dramatic scenery from both land and water. The Inside Passage, a cruise route interweaving through the islands, is among the most highly promoted attractions in Alaska (Cerveny, 2007). Communities within the TNF receive varying levels of tourism, with the highest concentrated in the northern communities along the passage, and the lowest in Wrangell

and Petersburg, peripheral to the passage (Clausen & Schroeder, 2004). Altogether, this industry brings over one million tourist each year, or just under 14 times the region's population.

In the heart of Southeast Alaska, residing about 200 kilometers south of Alaska's capital of Juneau, resides the island community of Petersburg, Alaska. The fact that Petersburg is an island community heavily affects the way of life for residents. The town is bordered by Kupreanof Island to the west and the continental mainland to the east. South of the town resides the Stikine River, which carries so much glacial deposit that it causes the oceanic strait to run dry at low tide. To access the town by water, you must travel the Wrangell Narrows to the southwest, whose width and tidal action severely limits the size of the seafaring ships or by traveling around the island of Kupreanof to access Petersburg from the northeast. The island is also not connected to the North American road system except for an inner-island road network. Air travel to Petersburg has traditionally been conducted through float plane but the town has seen growth in the regional airport with daily flights to the state capital of Juneau and the city of Seattle. The site also is centrally located on the Alaska Marine highway system which historically has been the main form of transportation in the region via ferry. Goods must be shipped via barge into the community twice a week during the summer and is reduced to one barge a week in the winter.

The marine resources of Petersburg have characterized its inhabitants' livelihoods for centuries. The Indigenous populations of Tlingit and Haida utilized the area as the summer fish camp and still maintain a close relationship with the land. At the turn of the 20th century, Norwegian settlers began inhabiting the area for the establishment of a fish cannery due to the geographical location. The town is situated next to the LeConte Glacier, the southernmost tidal glacier in North America, whose glacial ice represented a key resource in fish processing and transportation. The position of the town on the Wrangell Narrows also creates a natural harbor

that was utilized by the commercial fishing fleet. The commercial fishing industry has been the community's largest employer since its foundation coining the slogan "a town built by fish". Commercial fishing occurs year-round but is most active during the summer months of May to September. Other large employers include government agencies, retail business, and the tourism industry.

Tourism in Petersburg occurs from May to September, largely consisting of visitation via small cruise ships of less than 500 people and private yachts. The town is marketed as Alaska's "Little Norway" due to its unique Scandinavian population. Cruise ships are influenced by the geographical isolation as the Wrangell Narrows limits size of the cruise ship or ships must schedule an additional day for circumnavigation of Kupreanof to the north. Other main forms of tourism are bear hunting, festivals, fishing lodges, and visitation via ferry and flights. Petersburg, Alaska is characteristic of the regional shifts in livelihoods surrounding natural resource extraction economies but represents a unique form of tourism when compared to other Southeast Alaskan communities.

Ethnographic Research Design

The design of any research methods should be based on the best way to answer the research questions. In the decision to pick any research design, it should involve methodological and analytical decisions that lead to credibility, validity, believability, and plausibility of any study (Bernard & Gravlee, 2015). This research project will adopt an ethnographic approach which originates in cultural anthropology and is a qualitative form of inquiry used to study a cultural group (Creswell, 2014). As Spradley (1979, p. 3) states, "rather than studying people, ethnography means learning from people." As this research is cross-cultural and ethnographic,

this research will adopt an exploratory approach in order to learn as much as possible in four months (Babbie, 2013; Bernard, 2011; Creswell, 2014). It seeks to understand coastal Alaskan culture, how it is being influenced by systemic environmental change, and thus how tourism is influencing the community resiliency and sustainable development of residents of Petersburg to this environmental change.

This research design will result in a holistic understanding of local residents' emic perspective, that is, the viewpoint of those being studied (in contract to the etic perspective of researchers and/or theory, Spradley, 1979). This approach permits the researcher to "explore the beliefs, language, behaviors, and issues such as power, resistance, and dominance" (Creswell, 2007, p. 70). Ethnographers seek this emic understanding in order to relate back to the etic perspectives of the scientific community, and then contribute to that theory through modifications that better account for the learned emic ideas. These activities are highly appropriate for describing processes, the what and how of a culture, and how these are entwined in temporal dynamics and histories in the native, emic point of view (Bernard, 2011; Spradley, 1979). By identifying and prioritizing data from individuals with the highest levels of cultural expertise, the findings of this exploratory research offer first and foremost, a detailed and accurate description leading to idiographic theory about what is occurring in the local context, though the resulting details also offers much in the way of nomothetic explanation that may be applied to other research contexts (Babbie, 2013; Bernard, 2011).

This project will build upon an ethnographic understanding of the relationship between Indigenous communities and natural resource management agencies in Alaska that started in the summer of 2018 while working as an intern with the Student Conservation Society at Gates of the Artic National Park. Though the current project will take place in a

geographically and culturally distinct region, this prior experience nonetheless has helped prepare the researcher to continue with further ethnographic work in another Alaskan context.

Data Collection

A robust ethnographic study calls for multiple modes of data collection to ensure triangulation of data. This research is the product of data collection that occurred prior, concurrent, and after four months of fieldwork in the research site. This study employed the collection of archival, unstructured and semi-structured interviews, and participant observation.

Archival Data

The gathering of archival information and secondary data derived from the study site and the history of the natural and cultural resources of Petersburg occurred from March to November of 2019. Preliminary archival data was gathered on the history of the region through archeological and ethnographic journal articles. Government documents primary published by the United States Department of Agriculture was also gathered as the United States Forest Service and Pacific Northwest Research Station both represent entities whose research is highly contextual and impacts highly influence the way of the life of Southeast Alaska residents. Data collected prior to arrival consisted of the livelihoods of Southeast Alaskan residents, how these livelihoods have changed, and drivers of these changes throughout the 20th century. Additional information was gathered pertaining to governance, power, and the complex land tenure that now exists in the region and how the current population have or have not maintained their traditional livelihoods through time. This temporal data was then complimented with the growth of tourism

in Southeast Alaska overtime, where this growth in concentrated, and how it has impacted regional and local economies.

Archival Data collection continued throughout the researcher's time in Petersburgh. Key sources of archival data include the local radio station *KFSK*, the local newspaper *Petersburg Pilot*, Clausen Museum, Petersburg Public Library, and the historical records of the Petersburg Borough. Data collected ranges from 1965 to the present. Petersburg Comprehensive plans were collected from 1965 with the most recent plan published in 2016. Financial documents were also gathered since 2014 that include tourism expenditures that were taxed at the borough level. Port calls of tour ships were collected from 2002 to 2019. Information was gathered from past research conducted by the *McDowell Group, Inc.* who is tasked for all tourism research for the state of Alaska. Federal data includes outfitter and guide data from 2018 that operate on the Petersburg Ranger district including number of clients (tourists) using Forest Service resources, depicting a generic idea of the scale of tourism occurring outside of the city limits. Popular press data include articles published by *KSFK* and *Petersburg Pilot* about conversations surrounding the possibility of larger cruise ships, the temporary shutdown of the Alaskan Ferry system, and tourism related events that occurred throughout the summer of 2019. Furthermore, Petersburg marketing material was gathered from the borough, chamber of commerce, local travel agency *Viking Travel*, and *Yachting Magazine*.

In addition to these sources, the researcher was able to access public documentation regarding the tourism decision-making process regarding communication between government officials and cruise ship representative. Information includes a draft letter in response to the cruise inquiry to dock in Petersburg crafted by the Mayor and letters submitted to the borough in response to said letter. The 17 public letters are a unique source of data that represent individuals

and households' emic opinions emphasizing what residents believe to be the most important aspects of tourism development submitted on their own volition. Furthermore, opinions were authored by residents and did not represent a Petersburg institution or business unless otherwise explicitly stated. The authors of these letters include individuals who were interviewed, declined to interview, and community members inaccessible to the researcher. In total, nine of the authors were accessible during the course of the field work, of which six authors were interviewed while three declined. Documentation of this community decision making process thus greatly influenced the themes discussed. Additional documentation continued to be gathered after the completion of field work from local and regional institutions.

Participant Observation

Participant observation will be used as a complementary tool used in combination with other qualitative methods. Regardless of what type of social sciences research, participant observation should be used to enhance the quality of the data obtained and interpretation (Dewalt & Dewalt, 2011). This occurred in public settings and adopted the approach described by Spradley (1979) and Dewalt and Dewalt (2011), where the researcher systematically recorded observations of tourism interactions and exchanges, resident daily lives, and points of convergence between the two. Additionally, this method reduced reactivity by allowing residents to feel comfortable with the researcher as both work and leisure occurred in the research site (Bernard, 2011). By being in the research site for four months, residents addressed the researcher as the "man in the pink hat" and enabled the discovery of additional archival data, unstructured, and structured interviews.

Notable events and locations of participant observation include Syttende Mai or Norwegian Independence Day, the 4th of July, biweekly borough assembly meetings, Petersburg Indian Association monthly meetings, and the harbor docks. Participant observation was enhanced by the researcher's ability to act on volunteering opportunities involving monthly cigarette butt clean-ups, volunteering during Syttende Mai and 4th of July, and assisting the community cultural camp. As described by Dewalt and Dewalt (2011), this ethnographic method enabling the research to identify specific actions and products that indicated key concepts of the research setting including the discovery of the ongoing conversation surrounding the tourism decision-making process.

Informal and Semi-structured interviews

Both semi-structured and informal interviewing were also used to gather data for this study. Both types of interviews were conducted in a manner consistent to Bernard (2011), where the researcher is perceived as prepared and competent but not exercising excessive control. Furthermore, the researcher will also draw heavily on Spradley's (1979, p. 32) stance ethnographers should assume: "I want to understand the world form your point of view. I want to know what you know in the way you know it. I want to understand the meaning of your experience, to walk in your shoes, to feel things as you feel them, to explain things as you explain them. Will you become my teacher and help me understand?" This statement was included at the beginning of each interview in combination with IRB approval and research purpose. Interviews were recorded on the researcher's iPhone and a separate digital voice recorder. Interviews were conducted at the informant's convenience in locations ranging from canning facilities to the borough assembly hall.

The research guide (Appendix A) was composed of core questions composed of key interview topics including temporal dynamics of informant's livelihood, Petersburg, and tourism in the community and in the region. The questions were purposively staggered but varied if interview topics were organically addressed. Furthermore, the content of the guide was driven by knowledge gained through each successive interview (Guest, MacQueen, & Namey, 2012). As such, questions were added throughout the research process to further explore emic defined concepts to ideographically address the research questions. Probing techniques were utilized such to reinforce that the researcher is actively engaged and to encourage the informant to expand (Dewalt & Dewalt, 2011). These techniques were especially useful for informants who were not directly employed in the tourism sector. Over the course of four months, 28 semi-structured interviews were conducted ranging from 26 minutes to 104 minutes. In total 33 hours of interviews were collected with 31 informants, with three multi-informant interviews.

Over the four-month period, valuable data was gathered through informal interviews. Informal interviewing is characterized by no control of structure, which requires the researcher to remember and note the conversations heard throughout the course of the day. Within ethnographic work, it can be used to build rapport and uncover new topics of interest (Bernard, 2011). This data collection technique became invaluable to accessing difficult populations such as fisherman, whose schedules and mobility rarely allowed for formal interviewing. Additionally, informal interviews were used to build rapport within groups of diverse heritages. Data collected was input into the researcher's journal at the first opportunity to retain accuracy.

Sampling Approaches

During this study, multiple purposive sampling strategies were employed as flexibility is needed to gain the most accurate emic understanding (Creswell, 2014). Opportunistic sampling was employed at the beginning stages of field work in order to follow new opportunities to learn and take advantage of the unexpected (Creswell, 2014). Simultaneously, the non-purposive method of convenience sampling was use for informal interviews (Babbie, 2013). Quota sampling was used to capture a diverse range of perspectives of community members employed in key subpopulations based on independent variables of type of livelihood and time spent in the community (Bernard, 2011). As an understanding of Petersburg livelihoods and their perspectives of tourism is integral to the research questions, quota sampling was used to capture the three main livelihoods in Petersburg: commercial fishing industry, government, and downtown business owners. Informants were separated into categories based on self-reporting and were included in multiple categories. Additionally, informants who have lived in Petersburg at length were purposively sampled to give insight to temporal changes in the community.

Furthermore, a differentiation must be made to the definition of informant. As described in Bernard (2011), there are two kinds of informants; key informants who allowed the researcher access and rapport building to their cultural group, and specialized informants who have aptitude in a cultural domain pertinent to research questions. Integral to the beginning phases of the research was a key informant introducing the researcher to commercial fishing norms and schedules. Another key informant enabled the researcher to vast amounts of archival information to be using for triangulation of data. Specialized informants were used to gain a holistic understanding of the institutions in Petersburg and how each influence the tourism decision-making process. It is important to note that specialized informants shared their

knowledge of the institution but do not *represent* the institutions. To capitalize on these sampling strategies further, chain-referral sampling was used at the end of each interview to lead the researcher to additional informants that are information rich (Bernard, 2011; Creswell, 2014). With the ability to give unlimited answers, only six residents who were cited more than once by the 31 informants were not interviewed.

Table 1. Sampling Frame for Semi-structured Interviews

Livelihood	Commercial Fishing Industry	Downtown Business	Government	Other	Total
Sample Size	6	8	11	6	31
Ave. # years in community	40	31	20	46	32
Specialized informant	5	8	9	6	28
Key informant	1	0	2	0	3

Analysis Plan

Data gathered from archival research, fieldnotes related to participant observation experiences and informal interviews, and transcriptions from semi-structured interview recordings were all assembled into a corpus of text that was imported, organized, and analyzed in a specialized qualitative data analysis software package MAXQDA. An applied thematic analysis (Guest et al., 2012) was used to systemically analyze the rich ethnographic data and the resulting findings are being presented in consideration of the theoretical framing introduced earlier.

The management of the data in the qualitative analysis software is in line with Saldaña (2009). Pseudonyms replaced personal identifiers in MAXQDA while data still containing identifiers were stored in line with IRB approval. The transcriptions from the recorded interviews were initially transcribed through an automatic transcription service, *Temi*. Each transcript was analyzed for grammatical errors prior to being imported in its entirety in MAXQDA. As a lone

ethnographer, coding was conducted in solo to obtain an idiographic understanding of the "lived experiences" of informants. However, member checking occurred during fieldwork, structural coding occurred during transcription, analytical memos were kept in the researchers diary, and coding dilemmas were discussed with colleagues (Saldaña, 2009).

In the first pass of coding, the corpus of text data was structurally coded into an index allowing quick access of relevant information. A first cycle coding pass enabled refamiliarization with the data and the production of analytic memos through rigorous reflection (Saldaña, 2009). At this time, an effort was be made to use *in vivo* codes, as informants have a theory for the research questions, but it is not in academic terms; it's the researcher's job to figure what it is in their terms. Then, a thematic analysis proceeded using inductive coding allowing the researcher to become grounded in the data, allowing understanding to emerge through close examination (Bernard, 2011). The body of text was subjected to a second pass of coding to be thematically analyzed using focused, axial, and theoretical coding techniques. Collectively, these analytical processes provide the building blocks of both inductive/deductive analytical arguments put forth prior to answer the research questions and test hypotheses (Guest et al., 2012).

Table 2. Research Methodology and Analysis Plan

Research Question	Ethnographic Data	Sampling Approaches	Data Analysis
[RQ1] Resilience Analysis: Exposure, Sensitivity, Adaptive Capacity	Archival	Opportunistic	Structural coding (First cycle)
[RQ2] Social capital: Linking, Bridging, Bonding ties	Participant Observation	Convenience	Thematic Analysis: focused, axial, theoretical coding (Second Cycle)
[RQ3] Integration, Retainment, or Inclusion	Formal and Informal Interviews	Quota	

Chapter 4.

ANALYTICAL DISCUSSION

As established in Chapter two, this thesis interrogates the ethnographic findings of field research in Petersburg, Alaska through two theoretical lenses. The first lens is provided by resiliency theory, placing a particular emphasis on the concept of social adaptive capacity. Part I will address the influences of tourism on the resilience of Petersburg, Alaska. The research question and hypotheses explored in this section incorporate the concepts of exposure, sensitivity, and adaptive capacity. The second lens is drawn from sustainable development theory, with the emphasis here on forms of social capital. Part II then addresses social capital in Petersburg that has resulted from the growth in the tourism sector. The research question and hypotheses explored in this section analyze the ways that tourism has fostered new bonding, bridging, and linking networks. Finally, Part III will examine these dual theoretical perspectives, the interactions in the ways the concepts are treated in this study, and the potential convergence -- or divergence -- between the adaptive capacity and social capital concepts, as outlined in this study's final research question. Many small arguments and bodies of evidence are presented throughout this chapter that, while perhaps inconclusive individually, collectively provide compelling evidence regarding the role that tourism plays in multi-ethnic, natural resource dependent communities like Petersburg.

Part I: Resiliency Analysis of Petersburg Alaska

Part I of this chapter explores the first research question for this thesis, ***"does tourism affect the resilience of rural Alaskan communities in the face of systemic environmental change?"*** Ethnographic evidence is compiled into three sections that

correspond to the theoretical hypotheses derived from the literature review that relate to this question: *H1a: If tourism increases community resilience, we would expect to find evidence of reduced exposure to systemic environmental change*; *H1b If tourism increases community resilience, we would expect to find evidence of reduced sensitivity to systemic environmental change*; and *H1c: If tourism increases community resilience, we would expect to find evidence of increased adaptive capacity in the face of systemic environmental change*. Part I is therefore organized into three subsections related to exposure, sensitivity, and adaptive capacity.

Exposure of Petersburg to Systemic Environmental Change

Exposure is defined as the degree to which a system experiences environmental or socio-political stress (Adger, 2006). Thus, the shocks or stressors in exposure originate from outside the system to which the local community is sensitive to or can adapt to but cannot change. This operational definition includes shocks and stress from both the environment and social realms. Evidence presented in this section addresses environmental stress resulting from acute shocks, social shocks, and shocks and stresses within the economic systems as they are influenced by, and respond to, these environmental disturbances.

When analyzing exposure in Petersburg, it becomes clear that much socio-political stress derives from environmental change. The first such environmental shock came about in the logging and timber industry. The first lumber mill opened in Petersburg in 1901 and operated until at least 1985 (Sisk, 2007). Many residents attribute the collapse of the logging industry to the environmental movement that brought into question the necessity of the United States Forest Service (USFS) logging program, the conflicts of interest associated with the growth of tourism in Southeast Alaska, and trend of increasing net-loss in timber sales in

recent decades (Sisk, 2007). Eventually a collapse in the logging industry came about, an event that was frequently cited as a shock felt by all residents, including one who noted the following:

> We went through the, I'll call it the environmental movement, of people not wanting any kind of resource management extraction of any sort, whether it be mining, roads, anything. That was quite a shock because it was like jumping into a very hot and jumping into a cold pool, the shock of that going happening almost overnight in about two or three years (Informant 6).

The decline of the logging industry came to be perceived as resulting from the perceptions of individuals outside the system who viewed natural resource extraction -- the basis of much in the way of local livelihoods -- as a negative. Another resident further describes the impact the shock had on community livelihoods, “They either switched livelihoods, or they relocated all together. I know quite a few families that had moved away. I do know some of the families that are still here. There are other businesses that were heavily involved and earned business through the logging industry that are still here and adjusted” (Informant 5). Evidence suggest that the community was extremely sensitive to disturbance to the logging industry. The environmental movement leading to the collapse of the logging industry was entirely external to the community, providing the community little in the way of a means to limit their exposure to the changes brought about in the timber industry.

Ethnographic evidence of local systemic environmental change in the form of climate change was recorded through participant observation during field work in the summer of 2019, and these observations routinely confirmed that residents are intimately aware of changes in the environment. For instance, residents indicated that this was the first time in memory when the mountains did not have snow cover throughout the summer. Indeed, July was the hottest month of record for the state of Alaska (Leslie, 2019). The community uses

hydro-electric power as the main form of electrical production, where snowmelt is the source for drinking water reservoirs. With a lack of snow cover, hydro-electric dams were in danger of reaching redline levels, incapable of providing power generation.

Changing snow cover patterns affect stream levels during times of low rainfall. Not only does this diminish supply in drinking water reservoirs, but it can also cause streams to fall below minimum stream levels needed for anadromous salmon species to return to their native spawning grounds. Low stream levels and large salmon die-offs were repeatedly referenced -- and seen -- during field work, leading to international news coverage highlighting to die-offs at a state level (Perrone, 2019). Through informal interviews with local fishermen, the changing quality of the water was often discussed. Residents explained that as levels of the water fluctuate, the oxygen levels also rise and fall with changing temperature. One fisherman outlined the relationship between water levels, temperature, and oxygen levels:

> Without the rain, the water temperature in the streams was too high. If the water temperature gets too high, the water's not oxygenated. If the water's not oxygenated, the fish would die. It's predicted that in three years we could have a dire fishing season because so many fish that should have escaped up the streams didn't get there this year (Informant 10).

The shock of these temperature fluctuations did indeed lead to a large salmon die-off, a shock that residents describe will continue to ripple through the local economy for years to come. Because the spawning of salmon is cyclical and different species have different cycles, the impacts of a given disturbance like this are not going to fully understood until when that species of salmon spawns next. Evidence gathered here suggests that residents, whose livelihoods depend on intimate knowledge of local ecosystem functioning, are keenly

knowledgeable about how such shocks ripple through the system, yet they also have little local ability to reduce their exposure to these shocks.

Residents also acknowledged stress to the local environmental systems having spillover impacts on local social systems. Residents noted that all forms of boating, including that which occurs in the commercial fishing industry, contribute to wastewater pollution. However, as the scale of the ships involves increases, so does the scale of the wastewater pollution. One resident notes tourism's disproportionate contribution to growing concerns over wastewater pollution, "there's been a lot of gray water issues with them dumping their waste in the water. And that again is not helping our fish or the fishing industry or even like the impact of the beauty of Alaska" (Informant 4). Gray water is wastewater that has not been contaminated with feces, and much of the concern about gray waters is directed at the larger cruise ships. Some residents see wastewater pollution as a critical factor when discussing the scalability of tourism:

> The cruise ships are dumping it into narrows and all the beaches are contaminated. You're not allowed to go in the water. It's not safe. That is the huge deterrent for bigger ships around here because look what they're doing and there are people who are like, 'Oh that's fine, don't worry about it.' That's not fine (Informant 18).

Again, this resident exhibits a prevailing concern of community members that there is a positive relationship between environmental degradation and size of cruise ships. Wastewater pollution has led to measurable changes in water quality in the region. Five beaches in Ketchikan, Alaska, another Southeast Alaskan community, were closed during the summer of 2019 due to enterococci and fecal coliform (*e. coli*) bacteria. One major cause was small cruise ships (Resneck, 2019b). While there is also a distinction made between those cruise ships responsible for environmental impacts (e.g., larger cruise ships) and those which have

lesser impact (i.e., smaller niche yacht tours), the recognition is clear that both forms of cruise tourism expose Petersburg to added environmental stress.

Exposure can be operationalized as the degree to which a socio-ecological system is affected by environmental or socio-political stress originating from outside the system (Adger, 2006). This initial ethnographic analysis permitted a temporal understanding of the ways that systemic environmental change has historically threatened the local socio-ecological system maintaining livelihoods in Petersburg. Environmental disturbances to the climate, including rising local temperatures, creates acute impacts on the local environmental system through lack of snow-cover, stream levels, water temperature and oxygenation levels, and in turn fishery productivity. Regarding the tourism industry in particular, there is evidence this industry is also creating measurable changes in water quality, leading to new concerns about exposure to additional environmental harm. This is in contrast to Hypothesis 1a, which stated that if tourism increases community resilience, we would expect to find evidence of reduced exposure to systemic environmental change. The evidence that can be brought to bear on this hypothesis requires that it be rejected.

Sensitivity of Petersburg to Systemic Environmental Change

While exposure is the extent to the which the system is stressed by the environment or socio-political disturbance, sensitivity is the degree to which the system is likely to change in response to a disturbance (Cinner et al., 2013). According to resilience theory, if tourism increases community resilience, we would expect to find evidence of reduced sensitivity to systemic environmental change, as outlined in Hypothesis 1b. In this section, evidence is presented to address the sensitivity of the community to environmental disturbances over time.

Impacts felt in the commercial fishing industry are explored first, followed by further assessment of community sensitivity as related to the tourism industry. Themes that emerge in this section of the ethnographic analysis related to economic dependency on fishing, the quality of life historically enjoyed in the community, and community identity.

Natural resource dependency manifested itself in multiple examples. For instance, a common slogan in Petersburg is that the town is "built on fish." Petersburg was been supported by the commercial fishing industry not just since the community's founding in 1897, but centuries prior as this location served as a summer fish camp for the Indigenous peoples of the Tlingit nation. The primacy of fishing in everyday life is described by this fish processor:

> I'm going out and get my haircut. Then the first question will be, 'have the pink [salmon] showed up yet?' You'd go to the grocery store and you're walking through and you're talking to people whose kids on a boat and 'are they getting any up at Augusta?' I mean we're all talking that language this time of year (Informant 19).

Success of the community has historically been entirely dependent on the success of one industry--fishing. Even sectors that are not directly related to fishing, such as local small businesses (e.g., barbers, grocers), are indirectly dependent on fishing revenue. Even the local school system has adapted to the seasonal nature of the industry by developing online curriculum that permits family owned businesses to prioritize fishing operations over physical attendance in classes. Borough council meetings are scheduled around porting times of the fishermen who serve as council members. The slogan of "built by fish" is more than apt to describe this community's dependency on natural marine resources.

Acknowledgement of sensitivity to shocks and stressors influencing the fishing system can be seen through resident's perceptions of their own natural resource dependencies.

By recalling past shocks, community members exhibit the awareness of how prior shocks may lead to new outcomes. As described by one fisherman:

> It's not just one person who's affected, it's a trickledown effect, without fishing Petersburg would cease to exist. You know it used to be logging, fishing and the government was the three big pillars of Petersburg. Logging was shut down; fishing has been the significant challenges in the past years, and I would go out on a limb and say there is a lot more to come. It's an evolving industry and it will be interesting how people roll with the punches (Informant 1).

The resilience of Petersburg has been explicitly tied to the success of the commercial fishing industry. Further shocks and stressors identified within the fishing sector are expected to continue in the years to come, though previous strategies employed in the past may no longer be adequate for socio-ecological resilience (Armitage & Johnson, 2006). As the above quote implies, there are clear concerns about the resilience of particular livelihoods in the community, yet their remains faith in the resilience of the community as a whole.

Faith in the resilience of the community was tested recently when changes came about in the fish cannery industry. In 2018, the largest cannery in Petersburg, Ocean Beauty, permanently closed (Viechnicki, 2018b), creating a ripple effect of concern across the community. One resident describes fear about the longevity of community's remaining cannery, Petersburg Fishing Incorporated (PFI), "It's [PFI] role has changed, but it's still the plant. It operates, it runs, people work. There are people from town work there, fishermen from town deliver there. I think losing that would be, you'd take a hit in your hardworking town sort of identity, right?" (Informant 8). The cannery clearly stands as a visceral reminder of the town's fishing industry foundation. The resident goes on to state how community members' view the future:

> We've very much been natural resource extraction type town. Really depending on manufacturing, all the things that are having pressure on that. Is that a blip? Is it a trend? Is it climate change, are we going to experience real paradigm shift here?

> Then what do we do with that? So, how do we retool to be able to maintain what we have?... that's hard cause it really forces people to really reexamine everything that your town is about and what you're about. That's a hard pill to swallow especially if you don't have to (Informant 8).

The shock felt in the canning sector has heightened community members' awareness of how sensitive they are to the external market trends that influenced the closure of Ocean Beauty, and how vulnerable they remain to further socio-economic disturbance should the remaining cannery close (Gallopín, 2006).

Further vulnerabilities were expressed in regard to generational shifts that are occurring in the commercial fishing industry. Fishing is considered a generational, rite-of-passage occupation where children will learn from parents through experiential education, thereby inheriting family traditions. Yet for those individuals who have not inherited a boat, cost of entry into the fishing industry can be prohibitive, especially for youth. As one community resident describes:

> There's much more risk in not having a very good season, not being able to make payments if you are a young fisherman and you've taken out a huge loan to buy the boat, buy the gear. There's a huge amount of stress to be able to catch enough fish to make the payments and actually survive. That's had a huge impact on the kind of opportunities that you had as a fisherman. There's more risk and less reliability (Informant 16).

Historically, the reliability of fishing hauls would allow young fishermen to buy a boat with little risk of a loss of investment. Fishing was always reliable enough that the ability to pay off loans was assured. More recently, as fisheries have declined from external (e.g., climate change) and internal (e.g., overfishing) pressures, the risk of buying a boat, gear, and maintenance is much higher, and less likely to be seen as a wise investment. For young fishermen, purchasing of a boat and gear is increasingly characterized as an economically risky decision, due in no small part to the recognition of increased sensitivity to changes in the

fishery. This systemic environmental change is thus creating additional barriers to entry into the commercial fishing industry.

As barriers to entry increase for Petersburg residents, there has been an increase in outside ownership, as entities outside the community increasingly import the necessary monetary capital. One resident describes this generational paradox is known as the graying of the fleet:

> That's been happening where people from the West coast, Seattle or other areas are coming up and buying up the permits that used to be locally owned here. Each one of those boats in the Harbor is like a small business in itself. The seine boats, four or five employees per boat. Every time you lose one of those, it's kind of the equivalent of loosen a store on main street. It's a challenge in this town, for sure (Informant 5).

The loss of one single boat in Petersburg to outside ownership is characterized as a loss that detracts from the community's livelihood opportunities. Thus, the sensitivity of fishing to environmental disturbances is limiting entry into this main livelihood while also opening up the community to external interests, both trends that residents feel jeopardizes the longer-term resilience of the community.

Tourism, in contrast, is viewed differently. This industry has also experienced shocks, like the 2008 economic recession. At that time, Petersburg experienced a 20-year low in the number of cruise ships arrivals, and a three-fold decrease in revenues generated from cruise tourism in the community (*Petersburg Borough Comprehensive Plan Update*, 2016). The lack of cruise arrivals resulted in significant loss of tourism dependent livelihoods at bed and breakfasts, hunting and fishing lodges, and other charter services. While tourism jobs are not seen as “family wage jobs”, jobs economically feasible to raise a family, tourism jobs are recognized as an important source of income, for both the younger generation and as a retirement plan for older members of the community. Thus, the ethnographic evidence

suggests that the community is far less sensitive to fluctuations in the tourism sector than to shocks to the commercial fishing industry.

Evidence of the role of tourism on community sensitivity was also found in the regional and state systems in which Petersburg is embedded. The Alaska Marine Highway Ferry system (AMHFS) provides critical transportation and distribution support infrastructure. It is a critical resource, yet one that is highly vulnerable to state subsidies (*Petersburg Borough Comprehensive Plan Update*, 2016). The ferry system is considered a critical tourism asset for the community, "that has been the lifeline of Petersburg's...[since a] consistent foundation of a tourism industry is people getting in on the ferries" (Informant 19). In August of 2019, AMHFS workers went on strike for 11 days due to financial difficulties crippling all on-land tourism (Resneck, 2019a). However, some residents feel that there is an alternative explanation for the decline of the ferry system:

> When the cruise industry started coming in, we started having this conflict of interest with the state-owned cruise industry as I saw it. They started changing the scheduling around on the ferries and people stopped using the ferries and now the ferries were too expensive to ride anymore. They bent to the will of the cruise industry because it totally ruined our ferry system and it started to ruin towns (Informant 18).

Residents clearly equate the rise of the large cruise tourism in Southeast Alaska to the decline of the ferries that have historically served as the foundation of the Petersburg tourism economy. Thus, data suggest that the community has different sensitivities to the differing forms of tourism now at play in the Petersburg region.

Manifestations of sensitivity also occurred in discussions of tourism's contribution to non-fishing sectors. A common saying in the community is "one good day during the summer lets us stay open for another week in the winter" (Informant 8). Though business owners recognize that fishing is where "our bread is buttered" (Informant 7), and that

businesses would not survive without the support of locals, tourism is also seen as playing an important role in allowing businesses to stay open in the wintertime, as described by one resident:

> Here in Petersburg, every one of our storefronts is open all year long. The businesses are here for the local residents to shop your round, and they certainly get a boost in the summertime when all the visitors come. It's a good thing. I think that's the way I foresee Petersburg will continue to operate in the future (Informant 5).

Businesses are open all year round in Petersburg. This stands in in juxtaposition to other communities, which close their stores because of the higher sensitivity that characterizes the seasonality of large cruise tourism. As currently manifesting with smaller niche cruises and on-land visits via the ferry system, the tourism system in Petersburg contributes to the economy through direct purchases by tourists and indirectly through supplies bought by cruise operators. While seasonality in visitation also exists with this form of tourism, residents do benefit from year-round down-town business operation. The form of tourism occurring in Petersburg is not only less sensitive to seasonality, but it also reduces the sensitivity being experienced in the fishing sector by providing supplemental economic opportunities.

Petersburg, as a town "built by fish," is a community that is highly sensitive to changes in local environmental systems. Residents are aware that exposure and sensitivity to environmental disturbances may require shifting adaptation strategies (Armitage & Johnson, 2006). While fishing remains highly sensitive to such changes, indications are that tourism is reducing sensitivity. This provides support for Hypothesis 1b, that if tourism increases community resilience, we would expect to find evidence of reduced sensitivity to systemic environmental change. If larger scale cruise tourism were to further develop, tourism may heighten community sensitivity by degrading social resources upon which the community is dependent. For the time being, smaller-scale niche cruise tourism and visits via the ferry

reduce the community's overall sensitivity to the environmental disturbances that more negatively impact fishing livelihoods. By decreasing the dependency of non-fishing economies, and by providing a supplemental economy that provisions year-round services for all residents, tourism reduces the community sensitivity to the environmental changes affecting this region.

Adaptive Capacity of Petersburg to Systemic Environmental Change

Adaptive capacity is the ability of the system to evolve and accommodate environmental or socio-political stress, thereby reducing sensitivity and expanding the range in which the system can cope (Adger, 2006). While some consider adaptive capacity to be an agnostic quality or characteristic of particular systems, other definitions embrace the social component of adaptive capacity, including McClanahan and Cinner (2012, p.72), who define adaptive capacity as, "the conditions that enable people to (1) anticipate and respond to change, (2) minimize and recover from the consequences of change, and (3) take advantage of new opportunities." It is with this definition in mind that we here bring ethnographic evidence to bear on Hypothesis 1c, which states *if tourism increases community resilience, we would expect to find evidence of increased adaptive capacity in the face of systemic environmental change*.

Adaptive capacity accounts for processes of deliberate change in anticipation or in reaction to stress and overlaps with capacity of response to achieve a desired state (Folke, 2016; Nelson et al., 2007). This hypothesis explored in this section operationalizes adaptive capacity as actions taken by residents to expand the range in which the socio-ecological system can cope. Additionally, the ability to understand future circumstances is dependent on

individuals to learn from the past (Engle, 2011b). It is necessary to first provide some historical background on adaptive strategies have been implemented to perpetuate fishing livelihoods, though the emphasis in this section will eventually be the specific influences of tourism on adaptive capacity.

Petersburg residents are quick to note the prior adaptation strategies implemented by the commercial fishing industry. While today's fishing fleet is diverse, this was not always the case. Prior to the 1970's, fishermen were able to make a living by specializing in a single species. Fishing livelihoods have since diversified to allow fisherman to take advantage of multiple fisheries throughout the year. This can involve changes in gear diversity, geographic displacement to capture other species, and temporal displacement that involves taking advantage of multiple fisheries throughout the year. These strategies all extend the fishing season and allows flexibility to maximize efficiency and profitability. As described by one resident, the fishing fleet continues to be opportunistic:

> There'd be a new fishery out there. Sea cucumbers, bottom fisheries, gooey ducks, sea urchins, those are all bottom fisheries that have been brought forth in my time here. That didn't exist in 1976. Petersburg's been a player in all kinds of new fisheries. Fishermen went out and caught it and the processors went out and found a market for it. The prices started going up low and behold, the new fishery was evolved (Informant 10).

The fishing fleet in Petersburg has adapted from the original single species context. Fishermen have been able to utilize growth in new fisheries and been able to create demand for the product. The fishing fleet continues to be opportunistic today with the emergence of self-marketing in the past decades as described here, "They took it another level, not only do they have their own business operations for their fishing, but now they went another layer deep into having their own business, selling the fish" (Informant 4). Evidence here support prior indicators used by Cinner et al. (2013) of gear diversification and occupational multiplicity.

The commercial fishing industry also developed strategies to adapt to environmental shock and uncertainty. Individual Fishing Quotas (IFQs) were designed with the sustainability of marine resources in mind, yet local fisherman shifted activities in response from one fishery to another. As one resident describes the accumulation of IFQs in Petersburg:

> I think we have 500 permit holders in town, probably like 1500 permits. So they all own multiple, not all of them, but the majority of them have multiple permits and that's cause their sometimes making economic choices like, 'I'm going to do this fishery and not this one.' So they have more than one option at any time during the year based on price and based on what's going on with fishery (Informant 8).

Multiple permits are held by commercial fishermen, allowing them to access numerous geographic locations and fishing sites. These actions foster adaptive capacity by providing increased ability of fisherman to cope with changes in the fishery systems, such as fluctuating market prices or emergence of new economically viable species. Residents have thus come to have a high level of faith in the ongoing adaptive capacity of the commercial fishing sector.

Novel insights were drawn from understanding prior adaptive capacity strategies and how they continue to influence ongoing or future adaptation. When asked to identify the two most important economic issues in 2000 survey, twenty-six percent of Petersburg residents stated that the fishing industry should be increased, while a smaller proportion (14%) felt that economic diversification was needed. Traditional, natural resource-based extractive industries remained the most favored (City of Petersburg, 2000). One borough council member describes the ongoing appeal of extractive industries:

> We're on an Island in Alaska. You can't just drive down the road anywhere. You're very limited on what you can do as far as work. It's not like Amazon's not going to move ahead to quarters here. It is a resource state and a resource town, and without resources I don't know what you would do. As far as change over time, things will either stay the same, or they will just probably disappear (Informant 18).

Community resilience has relied upon natural resource extraction since its inception and some residents believe that it is the only path forward. A change in economy will result in loss of identity and collapse of the community. This conversation shares parallels with the discussion surrounding the closing of the cannery. Limited knowledge is known to influence community response to structural economic change (Bec et al., 2016). Evidence here suggests communities' trust of prior adaptive strategies related to fishing may inhibit the building of even more adaptive capacity going forward.

Tourism, on the other hand, often displaces traditional economic activities. Residents believe tourism is in fact changing the fabric of other neighboring communities. "Previous plans have made clear the community supports small scale, small group, and independent visitors, and wants to draw visitors who appreciate that Petersburg's downtown, unlike Juneau or Ketchikan, is still a "real town", focused on fishing and local life" (*Petersburg Borough Comprehensive Plan Update*, 2016).When discussing the shock of possible tourism development, one resident shares the primary attitude:

> My dad's good old days were before I was born, my good old days are my youth here. Good old days for somebody that showed up 10 years ago are right now. And so, it's hard to really come to a consensus locally on what we really want. But I think the attitude primarily is the visitor industry is great as long as it doesn't change our way of life (Informant 7).

While generational gaps clearly exist in this community, there is nevertheless broad consensus that the tourism industry should only be supported if it can exist symbiotically with the way of life that already exists in Petersburg. In the community's prior Comprehensive Plan, the community was split as to whether to restrict (40%) or not (47%) tourism development, while 83% of the residents stated that the most important factor was quality of life (City of Petersburg, 2000). This archival evidence corroborates emic views gathered in interviews that

indicate that adaptive capacity strategies revolve around perceived quality of life as much or more than around any particular livelihood strategy. Understanding local characterization of quality of life is thus essential to understanding the communities' desired state, that is, what they hope remains resilient in the face of change, be it social, economic, or environmental change.

Prior literature identified access to assets as one indicator of adaptive capacity (Bennett et al., 2014; Berkes et al., 2003; Cinner et al., 2013). Examples of access to monetary capital emerged when discussing community infrastructure. To access funds for harbor infrastructure capable of driving vehicles to the ocean front or a drive down dock, state approved cruise ship funds were used to gain enough financial capital. The anticipated response of the drive down dock is described by this borough employee:

> So really was focused on the commercial fleet. We didn't really think much about the tourism industry when it was designed and built that it just became the favorite of the tourism industry. Even though we use tourism dollars for parts of it, we thought as some of the boats might want to tie up to it. We did not expect the results were, they all want to tie up to it and they think it's great (Informant 21).

The role of the drive down dock to contribute to both fishing and tourism development was unexpected. However, the process described suggests that the opportunity for community infrastructure improvement related to fishing came about as a consequence of economic diversification into tourism. Thus, access to assets through economic diversification provides support for increased adaptive capacity through tourism.

Examples of access to assets manifested in policy analysis. In 2018, Petersburg implemented a marine passenger fee, also called a "Head Tax," of five dollars. This tax resulted in $38,000 in tax revenue for Petersburg in 2019 (Viechnicki, 2019b). Currently, there are only two other communities that have implemented a similar head tax -- Juneau and

Ketchikan, both communities that experience tourism on a much larger scale. State legislation dictates that head tax revenues be used to the benefit of maritime shipping, under which cruise ships are classified. As describes by one resident:

> However, we need to do it and learn from our neighboring towns and make sure that there's stipulations in place that the income that the tourists or the cruise ships are getting is as equal to the income the borough receives based on taxes. Maybe utilize the cruise ships to pay some of that infrastructure instead of calling it out of our own pockets (Informant 22).

Residents believe that local tax dollars used to support the borough government should instead be used for provisioning services for residents. In implementing the head tax, the community drew from lessons from neighboring communities to establish limitations on how the money can be spent. Using this knowledge, the head tax replaced local funds that were previously directed at infrastructure, such as the harbor improvements that support both the tourism and fishing industry. This provides strong evidence of tourism contributing to the adaptive capacity by facilitating learning, new knowledge, and access to assets (Bennett et al., 2014).

Regarding economic outlook, residents described changing perceptions of the role of tourism in future development. Petersburg has noted that the economy is stable but shifting, where fishing jobs have decreased through consolidation of the industry. While the Petersburg Comprehensive Plan indicated limited support for the industry, the most recent 2016 Comprehensive Plan indicates, “federal government and tourism offer the next largest employment opportunities, although federal employment is declining in the community” (*Petersburg Borough Comprehensive Plan Update*, 2016). The option to look at tourism as not just supplemental support for the fishing-based economy, but perhaps as the primary economic activity itself, is a decisive topic within the community. As one resident put it:

> I think that is a credit to this town and it's why we're still here. We talked about the fishing. Where's this global warming taking us? Is there going to be a day sometime

> when the fish just aren't here? Who knows? Someday in the future, maybe our whole industry, our whole economy is going to be based on tourism. I don't know. But by golly, this town will figure out a way to stay alive (Informant 10).

Petersburg is not emblematic of the larger tourism industry that has come to characterize Southeast Alaska. “Petersburg has up to this point because of geography, I would say [had] a certain reluctance on some people's part to get involved to with tourism” (Informant 19). Such statements reflect residents' recognition of systemic changes underway and an increasingly need for new forms of economic development beyond fishing.

Adaptive capacity also manifests through community infrastructure (Cinner et al., 2013). “Petersburg Borough’s resilient harbor facilities and related activities have and will continue to be strong contributors and determinants of the health of the Petersburg Borough economy.” (*Petersburg Borough Comprehensive Plan Update*, 2016) However, harbor infrastructure limitations were repeatedly exceeded by both the commercial fishing industry and the cruise industry. “Lightering” or when cruise passengers aboard a smaller vessel in order to access ports facilities was observed when the largest cruise vessel docked within the community. As described by harbor employee, this causes a logistical problem: “First of all, where the hell am I going to tie up 10 lighters? I will have to shut down parts of the Harbor, and for that industry, who right now is bringing in hundreds of dollars, I have the commercial fishing fleet who is bringing in thousands of dollars” (Informant 7). When discussing the possibility of increased scale in the cruise industry, this informant describes the logistical problems associated with infrastructure in the community. Facilitating additional docking space for tourism would result in less space for fishing vessels and direct conflict with the fishing industry. Sticking with smaller-scale niche cruise tourism keeps this relationship in balance for now.

Further community infrastructure issues were addressed by community members who frequently raised the topic of public restrooms. As one borough employee noted that this not only a quantity issue:

> If volume we're getting right now is what it is and it doesn't get any bigger, it's not an issue. If it grows, it's an issue. I mean and it's silly, then we can put port-a-potties up. Well that may work for me going to a rock concert or something. But folks who pay seven grand a piece to go on a Linblad cruise, probably don't want to use a porta potty (Informant 21).

More restrooms are needed to reflect the expectations of higher-status tourists. Thus, there is a growing recognition of the need to differentiate between the types of tourism the community develops in order to best address community quality of life. If larger cruise tourism occurs, community infrastructure capacity will be exceeded, and there will be less capacity to retain other desired qualities of the community.

Differentiating between large and small-scale cruise tourism is thus an essential aspect of adaptive capacity in Petersburg. The geographic isolation of this community has allowed it to capitalize on a unique niche form of small-scale cruise tourism. Tourist volume relative to other Southeastern Communities is low; however, this low-volume, high-yield form of tourism still allows for considerable high economic impact on the community. The juxtaposition of the tourists visiting Petersburg compared to other communities is described by this downtown business owner:

> We shouldn't be bringing in the large ships because they're going to overrun our community. Or it be overrun with people who want to spend 10 bucks. The cruise ships annual household income on a large cruise ship is $50,000, the average household income is almost triple that on these smaller boats that come to Petersburg. 50,000 versus 150,000. Nearly triple. I think it's 135,000, but still to me, that's the kind of customers that we want (Informant 3).

Economic impact is differentiated between the scale of the cruise visiting the community. Furthermore, this quote suggests those involved in tourism are keenly aware of the

demographics of tourists visiting the community. Businesses can sell authentic Indigenous and Norwegian goods to tourists. While social adaptive capacity indicators like gear diversity have been developed for fishing communities, indicators related to the diversity of tourist livelihoods may provide a parallel means of conceiving of adaptive capacity outcomes in the context of tourism.

Further analysis of different forms of tourism development provides even more insight into tourism's contributions to adaptive capacity. In 2013, *Yachting* Magazine rated Petersburg the number one destination in the United States ("Yachting's Best Towns 2013," 2013). While larger ships of approximately 250 passengers are operated by firms such as Lindblad Expeditions, who partners with National Geographic to offer luxury experiences, these cruise ships integrate community impact into marketing campaigns as described by this tourism operator:

> Part of their marketing is they're engaging with the community. They're buying food here, they're buying fuel here, they're buying stuff here as part of their cruise. And they're making that known as a marketing thing, that they connect with the communities (Informant 25).

Cruise ships at this scale can use the impact made on Petersburg as a public relations and marketing advantage. This leads residents to believe that there is a higher likelihood of receiving tourists who seek such valued characteristics of the community. Thus, the community exhibit increased adaptive capacity to differentiate and select small-scale cruise tourism on the basis of its ability to improve the resilience of both economically and culturally valued aspects of the community.

To conclude this section, etically defined indicators of adaptive capacity clearly manifested in the ethnographic data. The findings suggest tourism facilitates many adaptive strategies that anticipate and adapt to change, specifically for segments of the population most

sensitive to systemic environmental exposure. The need to differentiate between different forms of cruise tourism in order to retain unique development opportunities for Petersburg is a critical manifestation of this adaptive capacity. Yet there is also evidence of certain segments of the population being more well-positioned to exert this ability than others, who may be left out of tourism-related opportunities. As described by this resident, “I'd love really high-paid tourism, but you know, those are hard to find. Tourism can provide something for people. And I think without it, it's gonna be harder and harder for us to keep younger people here” (Informant 21). While this ability differs widely for different members of the community, there is at least some evidence of tourism being related to this ability, and thus some support for Hypothesis 1c.

Prior literature frequently invokes the concept of social capital when analyzing adaptive capacity (Cinner et al., 2013; Ferro-Azcona et al., 2019). Thus, in order to best understand the ways that tourism influences social adaptive capacity, it will be helpful to carry out a deeper exploration of the social ties that strengthen or undermine decision making at the community scale (Folke, 2006). Therefore, to more fully explore the outcomes of tourism on community development in Petersburg, the analysis now turns to a more thorough analysis of social capital.

Part II: Social Capital – “It’s not what you know, it’s who you know”

This part of the analytical discussion chapter analyzes how tourism is influencing three forms of social capital: linking, bridging, and bonding capital. The overarching hypotheses explored in this section revolve around whether tourism is promoting favorable community development outcomes by enabling social ties to actors in position of power,

leveraging interactions with other communities in the region, and facilitating more local level decision-making within Petersburg. This section is thus divided into three subsections. First, linking capital is assessed by exploring relationships between local level institutions and ties with regional and national institutions. Second, bridging capital is operationalized through social ties between Petersburg residents and residents of surrounding communities. Finally, bonding capital is assessed via analysis of social ties between residents and local institutions in Petersburg.

Linking capital in the Southeast Alaska Tourism system

Linking capital address social ties between members of different networks who differ in resources and information availability (Szreter & Woolcock, 2004). Based on theory, if tourism is promoting favorable community development outcomes, we would expect to see evidence of increased value resulting from better connections with key actors in power identified by both key and specialized informants. Yet as will be argued here, the lack of linking capital between regulation agencies and communities have led to degradation of the resources upon which tourism and communities depend upon. Both the tourism industry and commercial fishing industry in Petersburg depend upon the perception and reality that fish come from pristine waters (Morehouse & Koch, 2003), while tourism capitalizes on its appearance as the “last vast wilderness” (Bunten, 2008). A lack of cruise ship pollution regulation at the regional scale has led to measurable changes in water quality in local communities now unable to utilize their resources for recreation or subsistence. A further lack of trust and communication between regional and cruise institutions is exacerbating degradation of environmental resources.

Linking social capital is assessed here by exploring relationships between extra-local, regional, and national institutions. Regulation programs are a key policy prescription for regulating wastewater output from both the fishing and cruise industry as this issue cannot be effectively managed at a local level alone. As it turns out, cruise ships represent less than 1% of the global merchant fleet, yet they account for 25% of all waste generated (Butt, 2007). Concerns about cruise wastewater led to Alaskans voting in 2006 to pass the Ocean Ranger program, which monitors pollution from cruise ships by bringing U.S. Coast Guard license marine engineers aboard vessels to act as independent observers ("Ocean Ranger Program," 2019). A $4 per berth tax is levied on cruise ships, eliminating dependency on regional or local funds (Mak, 2008). In 2019, the governor vetoed the funds for the Ocean ranger program stating "we believe that there are ways to actually protect the environment," but he did not comment on what other actions were being taken or what the money originally allocated to this program would be used for in the future (Resneck, 2019c). The lack of opportunities for local community concerns to be represented in the decision-making about where the cruises port or dispose of waste water, leave little in the way of the meaningful or empowering connections to key actors in positions of power that characterizes linking social capital.

Linkages between local institutions and private tourism institutions can also facilitate social capital development. The decision to defund the Ocean Ranger program came only days after the largest global cruise line group, Carnival Corporation, was fined twenty million dollars in a pollution settlement for illegally dumping grey water into Glacier Bay National Park in Southeast Alaska (Resneck, 2019). Local reaction is summarized by this Petersburg resident:

> Well, July 1, that went away because the governor who's been bought off by that industry obviously took them off, so defunded the program. So now they're out

> there and we're just supposed to trust them. Last year there was a $20 million fine, given to one of those companies for not properly disposing, which the ocean ranger caught. You know, they're just gonna go back to business as usual (Informant 9).

This Petersburg resident references the lack of institutional trust that residents have towards the state's ability to govern marine resources. Trust is inherent in all forms of social capital as members no longer have to invest in monitoring the behavior of others creating easier movement of resources (Jones, 2005). This quote also emotes that varying degrees of trust in the monitoring of pollution exists between different scales of institutions and the large-scale cruise tourism industry. While the large-scale ships are yet to enter Petersburg, there have been proposals to bring in larger boats. As residents contemplate such opportunities, the record of pollution of large cruise ships inhibits the development of a key antecedent of social capital -- trust. With trust lacking between large scale tourism operators and local institutions, the building of linking capital will remain a challenge and agreements with larger cruise operators are unlikely.

Issues of linking capital have also manifested around other pollution issues within the borough of Petersburg. In Southeast Alaska, wastewater dumping is permitted in a mixing zone three miles from the coast, where the discharge undergoes sufficient dilution to meet standards set by regional institutions (Alaska DEC, n.d.). This regulation is viewed as insufficient for controlling the impacts of pollution on local water and fishing quality. Compounding this under-regulation is that no Ocean Ranger personnel are required aboard a vessel of less than 250 overnight passengers ("Ocean Ranger Program," 2019). Due to Petersburg's geographic location, the size of cruise ships visiting the location are defined as small-scale. This stands in stark contrast to the large cruise tourism occurring across the rest of the region. In 2018, even when one of these small cruise ships was caught releasing grey water

in the Petersburg Harbor, something not considering illegal due to mixing zones regulations, local residents were angered. Reporting of wastewater dumping in prime fishing areas, like LeConte Bay, also provoked outrage (Viechnicki, 2019a).

The interactions with the small scale cruise operators that followed further degraded their credibility with local residents, particularly when the company continued to alter their version of events (Denning, 2019). One borough council member described how they feel these cruise operators should be operating, “when tourism and the visitor industry come to Petersburg, they kind of need to be good neighbors” (Informant 13). Wastewater dumping in the harbor may not break formal rules but it was clearly inconsistent with the community's informal institutions about what constitutes neighborly behavior (Szreter & Woolcock, 2004). The tourism industry would need to be more cognizant and careful about respect for local norms and institutions if tourism is to enable stronger linking capital between the community and the cruise companies.

In spite of the above challenges, there have been instances where forms of linking capital have been brought to bear to effectively respond to pollution challenges. As frequently noted in this thesis, a key difference between Petersburg and surrounding communities is the size of the cruise ships that visit. The smaller-scale size of the cruise industry accessing Petersburg permits more in the way of informal arrangements between local institutions and private cruise operators. This permits a degree of respect for local institutions that would otherwise not be the case in other regional communities where larger-scale cruise operators make little effort to respect local institutions. This is described here by a borough employee:

> We work out something that says you're not going to dump in our Harbor even though you were allowed to. I have a feeling that most of them are going to say not a problem. That's probably related to the fact that the cruise ships who come here are small in nature. They want a good relationship with us and what they do here is a totally

> different set of activities than what they do in Juneau. Could be wrong, but I will bet you know that the groups that come here will likely want to work with us and will permit or no permit. They'll work through this with us (Informant 21).

The discrepancy in scale of cruise tourism translates into direct communication between the local community and leadership of the cruise company which allows the building of linkages through face-to-face interaction. The experience economy sold by the cruise ship is dependent on the support of the Petersburg community. The response by the community prompted a response by the cruise ship: "We've been visiting Petersburg for more than 20 years and value our relationship with the community. We've advised our fleet to secure their treatment systems while inside the Petersburg Harbor" (Viechnicki, 2019a). The cruise ship values the historical relationship built through continual interaction and trust. Therefore, while no policy formulation is occurring, there is evidence that the historic relationship between institutions of differing power levels facilitate decision making through a change in behavior for cruise ships while in Petersburg.

Additional examples of linking capital manifest in other realms of tourism management. Information sharing via social ties has been presented as "vital" for the facilitation of ideas, values, and social norms (Hwang & Stewart, 2017). Social norms were repeatedly expressed by local resident when discussing the behavior of tourism while in Petersburg. One resident describes the difference in rules between Petersburg and other communities, "So the rules and just our town rules. We aren't just like this theatric small town that puts on a show for tourism. We are who we are and there are rules and guidelines like anybody else and just that lack of knowledge maybe or caring about that" (Informant 31). Frequent comments were of tourists use of photography or gazing in dangerous locations used for transit or direct interference with job related tasks. Some residents have identified the need

for increased connections with tourism representatives to foster solutions as this one government official describes:

> We need to have those folks who are on that ship, who are engaged with the passengers explaining some of the concerns that we have because we don't want to be viewed as a Disneyland or whatever. We want to be viewed as you're coming in to see what we do for a day and how we do it (Informant 13).

Residents identify the need to foster connections with the cruise operators, specifically those on the ship, who communicate with tourists. The information communicated must be of expectation clarification where tourists should expect to see a working community, not a staged "Disneyland" version of an Alaskan coastal community. Several residents expressed the need to build linkages between the community and the cruise industry in order to resolve differences in expectations and social norms between residents and tourists.

As explored throughout this section, if tourism is promoting favorable community development outcomes, we would expect to see evidence of increased value resulting from better connections with key actors in power. Data offered here suggest little of the connections to key actors in positions of power that characterizes linking capital. Not surprisingly, evidence stemming from regional and local institutions found linking capital to vary greatly based on the level of trust present, though trust was most often lacking. Yet evidence at the local level was more mixed. There were accounts of the breaking of social norms by tourists and the small cruise operators; however, residents remained hopeful of the potential to build stronger linkages to these regional operators. Furthermore, through the relationships built through time, reciprocity was shown by the small cruise industry in changing of wastewater discharge behavior to conform more to local norms. Thus, data indicates tourism has made some contributions to linking forms of social capital, though again, the evidence is a bit too mixed to provide outright support for the hypothesis tested in this section.

Bridging capital fostering access to information

This section addresses the hypothesis that if tourism is promoting favorable community development outcomes, we would expect to see evidence of increased value resulting from interactions with other communities in the region. As will be argued here, bridging capital has facilitated the flow of information from communities within the region to Petersburg, and this information has been critical for arriving at a shared understanding of the implications of inviting larger-scale cruise ships into Petersburg. An increasing reliance on larger-scale cruise ships is seen as leading to a domino effect of economic dependence that would limit other livelihood options, namely fishing. The resulting tourism development is perceived by Petersburg residents to not represent community goals through the unsuccessful development of a cohesive tourism product (McGehee et al., 2010).

A starting point for assessing bridging forms of social capital is to explore social ties between Petersburg residents and residents of other southeast Alaskan communities. Twenty of thirty-one semi-structured interviewees (65%) describe unsustainable tourism practices in Southeast Alaska *prior* to being asked what impact the regional growth of tourism has on the decision-making process in Petersburg. Once questioned, *every* informant described unsustainable practices in the region, such as not adhering to social norms and obligation mechanisms. This ability to easily rattle off impacts of poorly managed tourism in other regional destinations indicates how Petersburg residents have acquired bridging capital from these neighboring communities, and these relations provide value in the form of insights into the likely outcomes of alternative forms of tourism development. One resident describes this flow of information about large-scale cruise tourism impacts from neighboring communities:

> There's a lot of people that see it like a parasitic type behavior just because we can't think of any positives for like the everyday person. Like I said, businesses are doing

> great, but for the rest of us it's kind of just like, 'Oh my gosh'. And you hear these stories from different places and then you kind of take them (Informant 4).

The "parasitic" metaphor makes it clear how clearly that local residents see the industry gaining benefits at the expense of other local communities. Such information is thus a critical resource that informs decision-making in Petersburg. The bridging with other communities enables ideas, values, and social norms that could not otherwise be accessed within a single network or community (Aldrich & Meyer, 2015; Hwang & Stewart, 2017). Residents largely described this sharing of information through storytelling from residents in neighboring communities, with most interviewees further stating that such stories were later "confirmed" through in-person visits to the communities.

Trust is a core component of social capital, and is intrinsic in each form of social capital (Moscardo et al., 2017). In the context of bridging forms of social capital, issues of trust--or lack of--surfaced in examples of those who succeeded in engaging with large-scale cruise operators. These residents acquired information related to profit sharing and co-management of local businesses through discussions with neighboring community residents. One resident describes a conversation with a downtown property-owning resident in a neighboring community:

> He said, 'I gotta tell ya, I've got this place here, but Princess Cruise Lines offered me twice what my rent normal rent charge for the space is. And I turned it down. I said, why would you do that? He said, 'because I can never do business in this town again if I did it. There is so much animosity in Sitka against the cruise ships (Informant 9).

The resident in the neighboring community denied an offer of doubling his income in the downtown rental space because of the "animosity" that exists in the community of Sitka towards the large cruise ship industry, and out of concerns of that animosity in turn being directed back at oneself. Just as adherence to social norms with the Sitka community led to a

lack of engagement with large cruise ships, adherence to social norms shared between communities keeps many in Petersburg likewise opposed to an increased influence of large cruise operators. Information can be considered a novel resource resulting from bridging capital if it cannot be obtained within a members' network (Aldrich & Meyer, 2015). Information that can only be accessed through connections outside the network and can pertain to sharing of ideas, values, and social norms, falls into this category (Hwang & Stewart, 2017).

Novel information about the crafty means by which cruise tour operators seeks to establish "obligation mechanisms" to get local resident to buy into contracts with the cruise companies was also shared via bridging social ties. Once cruise ship operators establish footholds of business ownership in the community, incentive systems are created that further reliance on the cruise industry. One such mechanism describes by residents was a kickback system. One Petersburg resident describes the transition from stores that local residents "grew up" themselves to stores that "clearly were not Alaska owned and operated":

> Stores that were purchased by the tour companies and they were the operators. We had watched this one business that was suffering and were told by the locals that all the other businesses that had been successful had bought in, the cruise ship companies had bought a portion of their business. They would advertise on the ship that you shop at this store because they were getting kickbacks from them (Informant 27).

In these other communities, cruise ship operators appear to first support local businesses through advertising to tourists, yet these arrangements establish a vicious cycle of commitment to the cruise industry for economic viability of businesses. The reliance of resources between actors of differing power can lead to corruption and suppression through these kinds of obligation mechanisms that reinforce the dominant party (Coria & Calfucura, 2012; Szreter & Woolcock, 2004); in this case, more economically and politically powerful

large-scale cruise operators. Here, the sharing of such information between communities provided residents of Petersburg with the information needed to recognize and thwart such obligation mechanisms (Onyx et al., 2014).

Social ties between communities can also facilitate the retention of valued local "authenticity" as these destinations experience growth in the tourism industry. This concern is embodied in the comments of one downtown business owner as he expresses concerns about how authenticity has been lost in areas where large-scale cruises have a lengthy history:

> Why would you go there when nothing's real? Nothing. You know what I mean? It's just all fake and you're not supporting anybody. You're not supporting the local that lives there. You're not seeing the real Ketchikan, I would hope when people come here, they see the real Petersburg (Informant 31).

While the geographic location of Petersburg has inhibited the arrival of the larger cruise ships, there remains concerns that this could change in the future. Other forms of cruise tourism-based development in neighboring communities is described as inauthentic or not “real”. Authenticity in the emic view of residents of Petersburg involves local ownership of downtown businesses, local control of commodification, prioritization of traditions for residents rather than tourists, and a symbiotic relationship with pre-existing economic activities, most notably, fishing. Information sharing through bridging capital suggests Petersburg may be able to learn from other communities vicariously about the loss of authenticity in order to retain their own sense of authenticity, collective identity, and sense of community (McGehee et al., 2010; McGehee & Santos, 2005).

Thus, regarding the hypothesis related to bridging capital that if tourism is promoting favorable community development outcomes, we would expect to see evidence of increased value resulting from interactions with other communities in the region, the ethnographic data presented here clearly provides support for this statement. The

communication of information between communities resulted in a more cohesive and locally-driven tourism development strategy in Petersburg that leverages the high degree of trust, collective action, and community values, that is, the bonding capital, which is explored in the next section.

Bonding Capital in Petersburg - "Our community is a relationship-based community"

The network view of social capital is defined as the norms, networks, and organizations through which people access resources, through which decision making occur (Grootaert, 1998; McGehee et al., 2010). Regarding the nature of bonding forms of social capital within Petersburg, this section assesses the hypothetical statement drawn from the literature that if tourism is promoting favorable community development outcomes, we would expect to see evidence of more local engagement in development decision-making within Petersburg. This section argues that manifestations of linking capital in environmental and behavioral management of tourists combines with the novel information gained through bridging capital to enable Petersburg to adhere to a locally defined sustainable tourism development plan. Catalyzing the internal collective action facilitated by the high levels of bonding capital are technological innovations in the cruise industry that present Petersburg with the possibility of increasing the scale of the cruise ships that currently visit Petersburg.

Petersburg lies at the center of the Southeastern Archipelago at the northern most tip of Mitkof Island. With the immediate geography of the location precluding any large cruise vessels from accessing the location, the community had considered the notion of creating a deep-water port to combat access issues prior to the turn of the millennia (City of Petersburg, 2000). Yet, even if such recently proposed infrastructure were to be created, large vessels

would still have to trans-navigate the island immediately to the north, leading to the loss of a day of travel time during which the cruise vessels would experience repetitive scenery. Thus, small cruise ships and yachts continue to dominate -- and be the preferred form of -- tourism activity in Petersburg. As describes by one resident:

> Wrangell Narrows is our huge limiting factor. If the boat can't come up to Wrangle Narrows, it's got to go outside. That's a long roundabout way to get here. So, geography the plays a part in the fact that we're a small town with a small venue of activities, which is what a lot of people are looking for. So that's been a big determining factor in our tourism game (Informant 10).

The Wrangell Narrows is a restrictive water passage bordering the western side of Mitkof Island. The eastern side of the island is a dry, oceanic strait which during low tide becomes impassible, thus trans navigation of Kupreanof Island to the east is necessary to access the community from the north. The inclusion of the community as part of the small-scale cruise itinerary has led to the development of activities representative of the community which residents believe provide the largest draw for tourists.

Bonding ties exists between individuals in a network who see themselves as being similar creating trust and cooperation among members (Putnam, 2000; Szreter & Woolcock, 2004). Bonding capital creates strong feelings of belonging, where the strength of bonds determines resources flow (Onyx et al., 2014; Smith et al., 2012). Regardless of the ethnic background or familial history, residents in Petersburg identify as members of this island community, and this shared identity creates a powerful source of bonding capital. Petersburg was founded at the turn of the 20th century as a commercial fishing hub. At that time, the neighboring glacier served as a resource for the cannery while the natural harbor served to protect the fishing fleet. Prior to this, Indigenous people of the Tlingit Nation used the site as a summer fishing camp for thousands of years.

While Tlingit members still have a dominant voice today, and Petersburg residents are quick to acknowledge the diverse heritages present in the community, residents repeatedly identified as being part of the "community of Petersburg." The sense of community is conveyed by one resident who describes Petersburg as “a relationship-based community”,

> I think we have a lot of our natives and natives, I'm not talking like Aleut or Tlingit, we just are native here in Petersburg. I think that the, the population of Ketchikan and Juneau is so few that they've lost that sense of community. Maybe not. They probably have community, little communities within Juneau, but we are the community. Here, this is our community. We have not lost that sense of community. We are the community (Informant 31).

Rather than identifying most strongly with an ethnic heritage, residents prefer to identify as a member of the Petersburg community first and foremost. This emic view can be attributed to a myriad of shared experiences in the community over subsistence, disaster response, cooperation in the form of volunteering, and the inter-dependencies that island life requires. The sense of community is evident in common phrases like, “it takes a village to raise a kid” (Informant 1). This sense of a “relationship-based community” suggests strong bonds exist among Petersburg residents that foster a strong collective identity.

Figure 3. Word cloud results to the community survey question, “What do you like about the Petersburg Borough?” Source: (*Petersburg Borough Comprehensive Plan Update*, 2016)

Manifestations of bonding capital were further evident in the role of local organizations involved in decision-making processes. Petersburg Borough Council is the highest governing body in the community. Its decisions impact the entirety of the 3,800 square mile borough (*Petersburg Borough Comprehensive Plan Update*, 2016). Residents express confidence in the borough council and the extent to which it reflects the interests of the community, as described by this resident:

> We've got to go through the process. Like we said, in a little town like Petersburg, if the democratic process doesn't work here, it doesn't work anywhere. And the reality is that it works really well here. We'll go through a process, it'll slow it down, and it always does. We'll have to have a dialogue at some point. The council will vote. If we don't like the results of the council. There's a new council coming in the fall and we'll continue to fight those battles until it's determined where we hit (Informant 19).

This existing governing institution, the borough council, has the trust of Petersburg. It symbolizes a democratic process whose result reflects the community (i.e., is reciprocal). If the processes do not suggest shared interests, residents believe the council will change until the community's needs are reflected in the decisions made. Evidence suggests that strong trust exists in local decision-making institutions represent the collective interests of the community.

Figure 4. Word cloud results to the community survey question, "What is the primary role of Borough government?" Source: (*Petersburg Borough Comprehensive Plan Update*, 2016)

In fall of 2018, a cruise company representative visited Petersburg to discuss the possibility of docking ships in the community that exceed the size of the any cruise ship that has ever visited. Such ships would be capable of navigating the restrictive oceanic passage described above. When the Mayor drafted a publicly available document in responded to the cruise company representing the community. The letter directed to the cruise companies stated, "It is our request that you refrain from booking any trips to Petersburg until the community determines what level of tourism we can handle without changing the character of our town" (Jenson, 2018). The individual actions of the mayor in drafting the letter to cruise operators stands in stark contrast to the democratic process of which the borough council represents. While Petersburg remains divided in its support for larger cruise ships, a larger discussion was catalyzed to ensure that the ultimate decision regarding tourism development would be a reflection the community. Seventeen letters were submitted by individuals and institutions in response to the Mayor's letters, and multiple town hall discussions also took place to debate the pros and cons of permitting the larger boats to arrive. These ad hoc forms of collective action contribute directly to the ongoing development of new institutions focused on sustainable tourism development, as defined by Petersburg community members themselves.

Current institutions in Petersburg also catalyze the dissemination of knowledge regarding tourism development that has been fostered through bonding capital with neighboring communities. Media resources such as the local newspaper and radio station play the vital role in disseminating this knowledge in a timely and extensive manner, ensuring residents have access to knowledge not otherwise available to them. One resident describes the role of the local newspaper the *Petersburg Pilot*:

> It's a uniter of the community. We have virtually saturation circulation, which means virtually every household reads the paper every week. Some people are looking for the high school sports; the high schoolers clip out their achievements. Pictures of the National Honors Society, pictures of sporting events, which the high school was mainly, we cover the school board meetings, we cover the assembly meetings. If you want to know what's going on in Petersburg, you pretty much need to be reading the Petersburg Pilot (Informant 10).

The newspaper is described as the "uniter of the community" where residents of all ages have access to information found throughout the community. While paper newspapers are perceived to be unstable in the age of the internet, this newspaper has "virtually saturation circulation" playing a crucial role in providing all the community with the same information, a key step in creating consensus. Bonding capital can facilitate information flow quickly to allow for a coherent voice in collective action in related tourism development (Hwang & Stewart, 2017).

With current institutions playing a significant role in the speed of knowledge dissemination, collective action is less constrained by time. The local radio station *KFSK* is able to share information in a daily setting and transmit knowledge to local residents about the borough council in real time. An integral function of the radio station is the broadcasting of the borough council meeting. One radio employee describes the role it plays in the community:

> By having us broadcasting it on the radio live, people participate. We hear often times, someone will come in, stand up before the podium and introduced themselves and they usually start off following their name by saying, 'I was at home listening and I had to come down and speak my opinion on this.' And that premise happens so often (Informant 5).

This quote represents a method of public participation enabled through the formal institutions in Petersburg. The distribution of information in real time allows for public participation in the local decision-making process. The informant goes on to describe the role the radio plays in

information saturation through an example of the borough council passing the yearly budget on the 4th of July due to the state government not passing the budget at the beginning of the fiscal year:

> We were broadcasting live and as I was downtown on main street one hour prior to the meeting. I was here at work because we were broadcasting the meeting was over in 14 minutes. When I went downtown, people were talking about it. People knew that their property taxes were just raised because they were listening on the radio. And then the parade started. It was a very strange situation. It was bizarre, but it showed me the power of what we do (Informant 5).

In describing the results of the borough council, this unique situation describes how residents are intimately informed about the role their government plays in their lives by information distribution institutions in Petersburg. Thus, collective action is a combination of the local government being a representation of overall community needs with the ability of residents to act on information available to all in an acute timeframe.

Bonding capital facilitated by easy access to trustworthy information is now being leveraged to address tourism-related decision-making. Residents of Petersburg believe they can be proactive in their tourism planning and set an example for other surrounding communities. As described by one committee member:

> We were beginning to feel really victimized. On the other side, it is an opportunity and like I have been preaching loud and clear to our community, to our, borough manager, mayor and anybody that'll listen, our senators and Congress people that I just don't want to be a victim. I want to demand a higher, better standard (Informant 7).

Perception that communities throughout southeast Alaska have been victimized by the large-scale cruise industry leads residents to hold the belief that connections with those in power is necessary to demand better regional outcomes. While strong bonding capital is reflected in local governance institutions, communication building between residents and senators or congressmen indicate a need to build linking capital with members in positions of power.

Despite diverse ethnic heritage, Petersburg is a “relationship-based community” where high levels of bonding capital support a strong collective identity and a high-internal capacity for development-related decision making. Data indicates strong trust exists in local decision-making institutions and their ability to represent the collective interests of the community. It therefore does indeed appear that tourism is promoting favorable community development outcomes by promoting more local engagement in development decision-making within Petersburg.

Part III: Theoretical Integration of Social Capital in the Assessment of Adaptive Capacity

Part three of the Analytical Discussion addresses the research question "*is social capital a suitable proxy for assessing adaptive capacity, or do both concepts need to be retained in discussions of sustainable tourism development?*" As seen above, adaptive capacity focuses largely on the *actions* taken to reach a desired state (Folke, Colding, & Berkes, 2003). The network view of social capital focuses more on the value that different forms of social relations provide. Scholars have focused on both concepts to analyze vulnerability and sustainability at the local level (Kyne & Aldrich, 2019). If networks that constitute the social system enable or disable the mobilization of potential resources, and facilitate connections with key actors in positions of power (Bourdieu, 1986; Hunt et al., 2015; Onyx et al., 2014; Szreter & Woolcock, 2004), then perhaps social capital is about creating *potential* for action (Bourdieu, 1986), whereas adaptive capacity may be about the specific actions taken. This chapter will explore these inter-relationships and manifestations of these

two concepts in an effort to arrive at guidance for future research involving these theoretical perspectives.

The relationship between Social Capital and Adaptive Capacity

The role of social capital in community resilience and development is not yet fully known (Guo et al., 2018; McGehee et al., 2010), as there is negligible understanding of the drivers of resilience or vulnerability at the community scale (Calgaro et al., 2014). Analysis of evidence that suggest the presence of social capital will be examined to elucidate interactions with adaptive capacity. Data addresses the role of obligation mechanisms, pollution regulation, policy development, identity, and institutional development. What is known is that when analyzing resilience at any scale, response a specific shock or stress is often needed to understand system dynamics (Cinner et al., 2013). We can therefore explore several such scenarios in Petersburg to elaborate on the relationship between social capital and adaptive capacity.

The role of social capital in community resilience manifests when an individuals' actions do not reflect the collective identity of Petersburg. As previously noted, multiple town hall discussions and public letters ensued mobilizing a collective voice for tourism development. The ideology of the tourism development process being symbolizing through collective action is described by this borough employee:

> I think having those conversations about, these were impacts and how are we going to deal with them upfront before they get here and having some more like self - determination type discussions. Here we're deciding our intent is this and if we decide that we're going to do this, then we're doing these things to try and address them as opposed to, 'Hey, they just knocked on the door and came in like that' (Informant 8).

Self-determination creates a collective voice that identifies what a community itself defines as sustainable tourism development. Evidence provided here states a step by step process through which bonding capital created opportunities for new forms of collective action that addressed issues of sensitivity and exposure, equating to increased adaptive capacity for the community overall.

The Alaska Department of Environmental Conservation state that there is no evidence of large cruise ships being a significant source of contamination (Pikul, 2019). Regulation at the local level concerning wastewater pollution is described by this fisherman:

> No dumping of any kind within the Bureau. We can put that in, but we have no way to enforce it. We just had no way to enforce it. My hope is that we will put it in and that at some point it will become enforceable because the impacts of the cruise ships (Informant 9).

In this example, the local community has identified an action that could be taken to reduce exposure and increase adaptive capacity to an environmental disturbance. Yet, without stronger links to key actors in positions of power in state regulatory institutions, this action is not feasible due to local limitations on enforcement. Regulatory institutions who would have been capable of enforcement, the Ocean Ranger Program, was disbanded through a ballot initiative at the state level (Resneck, 2019c). This leaves communities like Petersburg incapable of implementing an adaptive strategy, meanwhile those institutions capable of addressing the concern make decisions on the basis of information that differs from local perceptions.

Disparities in resources access can lead to corruption and suppression through obligation mechanisms that favor the more powerful interests (Coria & Calfucura, 2012; Onyx et al., 2014; Szreter & Woolcock, 2004). As noted in other regional communities, once outside cruise ownership is established, further financial incentives lead to increasing reliance on

large-scale cruise industry. One Petersburg resident describes the transition from stores "they grew up with" to "stores that clearly were not Alaska owned and operated":

> Stores were purchased by the tour companies and they were the operators. We had watched this one business that was suffering and were told by the locals that all the other businesses that had been successful had bought in, the cruise ship companies had bought a portion of their business. They would advertise on the ship that you shop at this store because they were getting kickbacks from them (Informant 27).

Kickbacks in the form of on-ship advertising creates a dependency on cruise operators, leading to a vicious cycle of increasing cruise company influence on local decision-making. The bridging capital between differently affected communities has alerted Petersburg residents to these methods of obligation enacted by the cruise industry, and thus enabled actions that have prevented similar arrangements with cruise operators from becoming characteristic of their community (Onyx et al., 2014). In this example, social capital played the strongest role in mobilizing the collective action needed to effectively increase community-level adaptive capacity.

Another resident involved in tourism describes further evidence of how tourism has provoked efforts to improve adaptive capacity in light of the negative outcomes of observed in other communities. Regarding the purchase of storefront property, one resident noted, "When the cruise ship wanted too big of a cut of their businesses, they said no and I think that cut down on their deep water port opportunities" (Informant 14). When the community refused to allow outside ownership, large cruise ship opportunities became limited. Yet in Petersburg, this is not perceived as a negative outcome. One downtown business owner describes situational awareness when addressing cruise dependency:

> I believe we need to get back to a certain point, but I wouldn't want to push ourselves over the edge where we are then dependent on the tourism industry, which has happened in every other community I think in Southeast. They get the little pulled in and it kind of snowballs. Pretty soon you have all of these businesses

> are depending on it and you can't go back because you have so many user groups who will be affected in the end (Informant 27).

The knowledge of the relationship between regional cruise development, and ways that local collective action could limit the dependency on it, exists entirely on the basis of bridges created across communities. The value that these social relations provide manifests in a cautionary perspective among residents regarding future large-scale cruise tourism development. In this regard, the connection between social capital and the anticipation of undesirable changes to the local system (i.e., adaptive capacity) is clear.

Findings of this study thus suggests ***directionality*** in the relationship between social capital and adaptive capacity. In terms of exposure to systemic environmental change, residents have identified avenues forward for improving adaptive capacity despite the historical lack of linking capital between residents and state regulatory institutions. Interestingly, perceptions of the actions needed to achieve sustainable outcomes appear to differ based on which other forms of social capital are present. Information access is influenced by both bridging and bonding forms of social capital, and such information is often essential to the ability to anticipate change.

When addressing the potential change that would accompany large-scale cruise tourism development, manifestations of adaptive capacity and social capital were seen in policy development. The Petersburg borough council formed the Ad Hoc committee to specifically address this issue. One committee member describes the purpose of the new institution: “What we want the future of the community to look like and finding what we can do to make that a reality or to discourage certain realities.” They go on to state the composition of the committee:

> The Borough has been really great about creating the ad hoc committee to collect data about tourism. On the ad hoc committee you have all these different people, people from the commercial fishing industry, the charter fishing industry, the canneries, main street business owners, the chamber of commerce, the Harbor master, museum director kind of coming together and thinking about all the different aspects of tourism and how it affects the community (Informant 16).

The Ad hoc committee membership includes diverse stakeholders representing major economic sectors and powerful institutions in the community, yet it also represents the interests of more humble residents, as one fisherman describes:

> The question is whether we open our arms to them and try to find a way to partner with them. And I mean partner with providing them an opportunity to come. Cruise ships can have very high demands. Cruise ship companies can come in and they can want the town to change for them. They can want the town to pay them to come. Petersburg's not going to do that but is there a way for some of these smaller vessels to come in, we share what we love about Petersburg and leave some of their money behind as we wave goodbye (Informant 19).

This new governance structure is directly influencing policy related to community resilience in a representative way (Duit et al., 2010), thus affecting the future adaptation to social and ecological change (Bennett et al., 2014).

The role of social ties between the community and the operators of small cruise vessels was also seen in actions taken to address pollution. When addressing the breaking of social norms by small cruise vessels, a committee member anticipates how such impacts would scale up with the arrival of larger vessels:

> The recent dumping that's been reported happening out in Frederick Sound, the committee that's been working towards creating a tourism plan for Petersburg or what we would do in the instance of bigger cruise ships coming in. They're trying to mitigate those concerns. They would try to have gentleman's agreements with these cruise ships that would just say, 'you just don't do that or else we just really will not open our doors to you.' There's nothing legal where we could deny them coming in. (Informant 15).

While members of the committee acknowledge that legal resource is limited, mitigation strategies are identified through the creation of "gentlemen agreements" with operators that

have a longer history in Petersburg. Gentleman agreements are based on trust, a key characteristic inherently in all forms of social capital (Nooteboom, 2007). Thus, the findings presented here suggests that temporal understanding of social capital are needed to properly understand the current feasibility of actions taken to increase adaptive capacity.

Further analysis of the marine passenger fee, or head tax, reveal ideas that closely resemble etic notions of adaptive capacity and social capital. A marine head tax stipulation was instituted because cruise ships that home port in Petersburg are only charged a marine passenger fee once. This is believed to encourage increased time spent in the community (Viechnicki, 2018a). The variable of time is addressed by this resident:

> They can really understand Petersburg and not the quick, show up at 10 o'clock in the morning, leave at four o'clock in the afternoon type. Basically, not see any increase, but see the tourism have more depth. In other words, take them up to the hatchery, take them up to the South end of the road, spend more time and see what Petersburg is really about, instead of just this quick snapshot view of this little town of crazy people that live on an island in Southeast Alaska (Informant 9).

There is a consensus that the greatest increase in benefit from cruise tourism occurs through "depth" rather than quantity, what tourism scholars have referred to as low volume, high yield tourism. While the head tax policy clearly provides some financial benefits, it is the opportunities for authentic interactions between hosts and guests that enable building of connections and understanding can only be developed through increased time spent in the community. These outcomes are valued at least as much of the revenues generated by the head tax. This finding indicates that the collective bargaining process that was facilitated by high levels of bonding capital in Petersburg resulted in higher quality, more authentic interactions and experiences for visitors. Thus, while evidence indicates a directional relationship from social capital to adaptive capacity, feedback mechanisms are likely to further reinforce social capital.

Furthermore, one of the intangible resources for tourism in Petersburg is culture (Briassoulis, 2002). Petersburg residents believe the commodification of culture that often occurs in the context of tourism should be controlled at the local level. One resident describes this succinctly, “I'm keeping it in the back of our minds that we have to be good stewards of our local culture and that we didn't want it to change our community too much, but yet we realize that there's economic development that can happen as a result of our inviting these visitors to come here” (Informant 28). One resident describes the need to protect culture and maintain balance between social and economic implications for the local tradition *Syttende Mai*:

> You go to many of the events during Little Norway Festival and you're sitting beside the locals. It's not a tourism thing. It's something we do for ourselves about ourselves. A lot of our friends and family come and visit that time together. It's a really special thing. And yes, Mr. Tourist, you're welcome to partake, but we're not doing it for you. It's for us. And I think that's the charm of it. And I think that's the charm of Petersburg (Informant 7).

In spite of the presence of diverse Indigenous and European heritages, strong bonding capital exists in this “relationship-based community”. Strong community cohesion (i.e., bonding capital) create a strong sense of purpose in maintaining local traditions (i.e., adaptive capacity). This has been particularly important to local residents as the broader regional economy of Southeast Alaska has transitioned away from natural resource extraction to service-based tourism activities (Cerveny, 2004). The intact community identity is seen as an amenity and pull factor for visitors to Petersburg:

> There was a lot of discussions about like, what makes a town of desirable destination? I think part of it is that we're still a fishing town. That's our industry and I think that a lot of tourists like that because we're functioning, working, got canneries and working Harbor and people live here year-round instead of just seasonally. And so that's something I think that makes our town unique and interesting (Informant 16).

In this way, strong bonding capital within the community can be leverage to market for increased tourism while also opening the door to a symbiotic relationship with the commercial fishing sector. A perception that Petersburg remains an "authentic working community" also reveals ways that occupational multiplicity has emerged in response to the economic change in the community. Diversification via tourism, rather than dependency on tourism, increases community resilience.

Putting the Social into Adaptive Capacity

In continuing to address Research Question 3, is social capital a suitable proxy for assessing adaptive capacity, or do both concepts need to be retained in discussion of sustainable tourism development, the findings presented here support the need to retain both concepts individually. Social capital appears to be a necessary condition for adaptive capacity to arise in the context of sustainable tourism development. Individual analysis of social capital provided insights as to what actions were feasible for Petersburg residents. Bonding capital directly enables effective and representative decision making in Petersburg by fostering consensus about which information should be used as the basis of tourism development planning. Increasing value resulted from bridges with neighboring communities, which provided counter-narratives about experiences with the cruise tourism industry that contrasted with the promised of cruise tour operators. These counter-narratives were essential to the development of a more cohesive tourism development policy based on local community values. While the analysis of linking capital indicated comparably less value coming from the limited connections to key actors in positions of power, overall, the value of social relations

within and between communities is increasing the capacity of Petersburg and its resident to adapt resiliently to change.

In this study, emic views gathered from Petersburg residents outline a step by step process of cultivating bonding forms of social capital within the community, resulting in additional opportunities for the collective action necessary to ensure more sustainable outcomes of tourism. The desired form of tourism development takes into consideration, and directly addresses, issues of sensitivity and exposure to the types of environmental changes that affect the fishing industry that has single-handedly supported the community in the past. It is clear that diversification of the economy to include tourism, and the spillover effects this transition is having on the manifestation of social capital, and bonding and bridging forms in particular, has increased adaptive capacity and thus community resiliency overall. Further evidence was provided that while the relationship between social capital and adaptive capacity is largely directional, with an increase in social capital providing the additional capacities needed to adapt to change, effective actions taken to address adaptive capacity in turn also benefit social capital.

Scholars have put forth the idea of social adaptive capacity, partially to distinguish between purely ecological adaptive capacity of a socio-ecological systems (e.g., McClanahan & Cinner, 2011). In their efforts to highlight social dimensions of adaptive capacity, these scholars included a single-item measure of social capital in a multi-item set of quantitative measures of social adaptive capacity. The findings in this study demonstrate the need to more fully examine social capital qualitative, via multiple dimensions, if a proper understanding of the social dimensions of adaptive capacity is to be effectively understood and cultivated. When social capital is to be analyzed in a void of attention to adaptive capacity, or if adaptive

capacity is assessed without attention to the nuances of social relations that enable different courses of action, then a more holistic assessment of community resiliency and sustainable tourism development would remain elusive.

Chapter 5.

CONCLUSION

This purpose of this ethnographic study was to holistically understand, from the emic point of view of local residents, how tourism is influencing community resilience in Petersburg, Alaska. In drawing this thesis to a close, Part I of this chapter will first address a few of the theoretical insights gained in the process of conducting this research. Emphasis will be placed on the important contribution this research makes to integrate resiliency theory, and the concept of social adaptive capacity in particular, with the writings on the role of social capital in sustainable development, focusing on sustainable tourism development in this case. The work presented here will thus be of broad interest to resilience, development, and tourism scholars. Part II of the current chapter will examine future research directions that build on these contributions and applications pertinent to the community of Petersburg, academics concentrating on Southeast Alaska, and region and federal institutions operating in the area. Part III addresses limitations within the methodology and literature, combined with specific limitations involved in this project. Finally, Part IIII focuses on broader impacts and final thoughts of this research.

Intellectual Contributions of Unifying Resilience and Development Theory

The concept of resilience originated in field of ecology addressing the capacity of ecological systems to persists when disturbed (Holling, 1973). Meanwhile, vulnerability as related to socio-ecological systems originated in the disciplines of human geography and human ecology (Adger, 2006). It is not unusual to see both resilience and vulnerability encapsulated within the larger realm of sustainability science (Folke, 2016; Turner, 2010).

In both cases, the concept of adaptive capacity is often cited as the capacity of response, and in at least some cases, adaptive capacity has thus been considered a uniting element between the two disciplines (Engle, 2011a). The findings of this study extend this thinking and corroborate the work of a smaller group of scholars who have begun to draw attention specifically to ***social*** *adaptive capacity*.

The important implication of the emphasis on social adaptive capacity is it encompasses the specific types of actions the people can take to improve resiliency. This contrasts with ecological qualities that create ecological adaptive capacity of systems. Clearly, confronting challenges of the Anthropocene requiring explicit attention to the forms of action, individual and collective, that are likely to improve adaptive capacity to undesirable changes to the systems supporting our wellbeing. The integration of a specific social component of adaptive capacity remains to be fully integrated into the disciplines where resiliency theory originated, including but not limited to ecology, human geography, and human ecology with the field of sociology and the larger realm of development literature (Adger, 2006; Putnam, 2000).

Integration of the social capital concept as a means of accounting for the social components of adaptive capacity are also an important contribution here. Individual analysis of social capital provides insights into which actions are feasible for communities, and also the ways that particular types of social interactions could be stimulated to enable additional actions in support of adaptive capacity. In this regard, a social capital perspective integrated into social adaptive capacity not only illuminates what actions are not only feasible, but also which are likely to be most effective at achieving resilient and sustainable development outcomes.

By examining a research question related to the need to retain both social adaptive capacity and social capital concepts separately, understanding is advance when both concepts are assessed, and that both are necessary for identifying the most sustainable pathways for tourism development in communities undergoing anthropogenic change, like Petersburg, Alaska. When using both concepts to investigate the sustainability of current forms of tourism development, insights were revealed that will yield new questions and research opportunities in the broad bodies of literature cited above. For instance, this analysis suggests that social capital is an important antecedent for the types of effective actions needed to increase adaptive capacity. Both perceptions and realities of tourism influence the degree of compatibility or symbiosis it may have with existing economic activities.

In-depth analysis of the social relations is essential for determining if adaptive capacity action is feasible within the means provided by bonding, bridging, and linking forms of social capital. A gap in the tourism literature exists regarding analyses of the network view of social capital at the community (Guo et al., 2018; McGehee et al., 2010). Current tourism literature on social capital also tends to focus on how tourism-related businesses benefit from existing social capital arrangements in study communities, with much less attention paid to the ways that tourism influences social capital exists (Hwang & Stewart, 2017; Moscardo et al., 2017). In this study, numerous such mechanisms were identified. The network approach that accounts for bonding, bridging, and linking forms of social capital provides more nuance in the way that scholars use incorporate social capital thinking into vulnerability and resilience assessments (Kyne & Aldrich, 2019).

The integration of resilience and social capital theory also adds valuable insight into

how individuals interact and organize themselves to gain access to power. This research extends prior frameworks addressing community resilience to include of social capital as the explanatory mechanism (Bec et al., 2016; Calgaro et al., 2014). Social capital facilitates the creation of institutions, including to directly or indirectly address issues of exposure and sensitivity. In this way, the inclusion of social capital into resilience theory, and into the adaptive capacity concept in particular, could be characterized as an extension of 'the missing link' idea that has been used to characterize social capital's role in sustainable development (Grootaert, 1998; Bebbington, 1999).

Lastly, this research also highlights the value of ethnographic methods for understanding emic views of tourism, of community resilience, and of the ways that social organization relates to perceived capacity to adapt to change (Brown & Westaway, 2011). Temporal insights are needed when addressing resilience because prior strategies may continue to influence current thinking even when they are not sustainable or resilient to new forms of anthropogenic disturbance (Armitage & Johnson, 2006; Smit & Wandel, 2006). As such, ethnographic methods are highly appropriate for describing processes and how these are entwined in temporal dynamics and histories in this native, emic point of view (Bernard, 2011; Spradley, 1979). By prioritizing interviews with key informants of the highest levels of cultural expertise, results originated from individuals of diverse demographics within the community that permit a broader, idiographic understanding of the ways that tourism influences social capital and thus social adaptive capacity via governance and decision-making processes within the community (Babbie, 2013; Bernard, 2011).

The value of ethnographic methods to exploratory research is well-demonstrated here (Guest et al., 2012). Tourism research has only recently begun to include resiliency

perspectives into the theoretical framing of research, and studies specifically focused on adaptive capacity (much less social adaptive capacity) in the context of tourism remain very few in number. As such, empirical analysis is lacking for the factors of community resilience in tourism destinations (Biggs et al., 2015), which with little knowledge of vulnerability drivers in destinations ultimately leads to the creation of ineffective resilience-building solutions (Calgaro et al., 2014). In such situations, exploratory ethnographic research can yield much preliminary understanding of how these etic concepts manifest for communities undergoing socio-economic transitions into tourism, and in the process, enable future confirmatory research as outlined in the next section.

Future Research Directions

This research described multiple pathways through which tourism influences community resilience. An understanding was sought as to how coastal Alaskan culture is being influenced by tourism, and thus how tourism is influencing the community resiliency and sustainable development in Petersburg. Here, etic perspectives addressing known knowledge of community resilience and indicators of adaptive capacity were modified to better account for the emic perspectives of Petersburg residents. Despite testing several hypothetical statements derived from the literature, this research is primarily a qualitative, exploratory effort designed to understand how tourism has unfolded over time in Petersburg and the meaning it has come to have for local residents. The findings of this qualitative analysis allow for future confirmatory, quantitative assessments of social capital and social adaptive capacity resulting from tourism.

Tourism may contribute and detract from community resilience in a multitude of

ways. Evidence shows that even when tourism may be a viable economic option, social systems can inhibit diversification of economic portfolios for communities. More research could improve understanding of the role of collective identity and the *desire* to change when considering residents perceptions to potential tourism development. A community may not desire tourism development when trust within the existing economic sector is high. Furthermore, the desire for tourism development may actually be conceived as a threat to identity when control of commodification of livelihoods exists outside of the community (Bunten, 2008). Future research could illuminate the ways that decisions are made when multiple capabilities (i.e., pathways to adaptive capacity) are present. The ethnographic methods' ability to understand temporal dynamics have helped reveal that prior adaptive strategies used in the commercial fishing industry greatly contributed to resident's perception of future tourism development. These temporal dynamics are likely to be unique across study contexts. Ethnographic explorations will thus continue to provide much value in developing tourism destination.

This research will also be applicable to academics operating in the region, beyond those who may be including resiliency and/or social capital theory into their work. The regional economies of Southeast Alaska have transitioned from natural resource extraction to tourism economies (Cerveny, 2004). The large-scale cruise tourism industry continues to grow in the region. Residents are keenly aware of the impacts of this growth at the states, regional, and local level. Drivers of both resilience and vulnerability at the local scale have been identified in Petersburg. While Petersburg is similar to many other communities in Southeast Alaska in terms of demographics and dependency on natural resources for both extractive and non-extractive industries, the development of small-scale niche tourism is

not. Furthermore, Petersburg is not dependent upon tourism as the main source of livelihood. Evidence indicates that social capital and resilience in these local communities differ from Petersburg. Comparative analysis is needed to understand how large-scale tourism dependency impacts community resilience.

Limitations

There are inherent limitations with both the methodology and theory used in this study. Theoretical limitations exist within the concepts of resilience and social capital. Resilience research at the community scale is inherently contextual as the driver of resilience and vulnerability are based upon the socio-ecological system upon which communities are embedded within (Calgaro et al., 2014; Folke, 2016). The capabilities of Petersburg, Alaska will therefore be different than any other resilience context. This limitation of context can also be applied to social capital, as it is the social ties within a system that define resource potential (Bourdieu, 1986). Therefore, the resource potential within a social system will differ based on a communities' bonding, bridging, and linking capital. Clearly, context matters, but a holistic understanding of true resource potential and bottlenecks cannot be gained without analysis of individuals whom these social ties connect.

Additional logistical limitations also influenced this study. More time engaged in ethnography in the research site would extend the understandings initiated here. For instance, additional fieldwork, or perhaps follow-up fieldwork in the future, would be necessary to understand if future actions taken by the Ad Hoc committee will increase community resilience through tourism and if the committee will become permanent.

Furthermore, knowledge gained through informal interviews indicates that Viking Cruise Lines will not visit the community. However, another cruise line of similar size, Hurtigruten, is speculated to dock in the community during the summer of 2020. Time is needed to understand if this form of cruise tourism will increase or decrease community resilience.

As this research purpose was to gather an idiographic understanding of the various impacts of tourism on community's resilience to systemic environmental change, this research sought to understand all possible ways that social ties or indicators of exposure, sensitivity, and adaptive capacity, were affected by tourism. In contrast to this idiographic effort, a more quantitative effort would be required to accounts for the magnitude of the relationships and thus to nomothetically confirm the most pronounced explanations and effect sizes (Bernard, 2011).

In undertaking future ethnographic work, a multitude of changes will be considered. First, a greater focus on rapport building should be taken through informal interviews. Patience and humility were learned through unsuccessful requests for formal interviews at the beginning of field work. Next, informal interviews should be prioritized at the beginning stages of fieldwork. Initial formal interviews using the original semi-structured interview guide proved to be too heavily focused on etic understanding. By prioritizing informal interviews at the beginning of field work, greater efforts would been placed in learning and understanding. Next, the use of a daily dairy became an integral document in understanding how to interpret field notes while acknowledging the emotional state when the notes were written. Unsurprisingly, the dairy has continued to be an invaluable resource throughout the writing of this thesis. Finally, the deciphering of results pertinent to the

research question proved difficult due to the methodology chosen and nature of the researcher's first project. The lived experiences of Petersburg residents were the researchers lived experiences for four months; thus emotions, memories, responsibilities, and most of all, growth, are tied to this document.

Broader Impacts of This Research

The importance of this work to the community of Petersburg cannot be underestimated. The ethnographic method undertaken in this research integrates the researcher into the lived experiences of the informants (Spradley, 1979). Furthermore, social capital is built through time and trust (Nooteboom, 2007). The social ties facilitated through daily interaction were integral to the success of the researcher. To fulfill my responsibility to local residents, this thesis will be sent back to each informant. Residents were promised a detailed and accurate description of what is occurring in the local context, though this idiographic understanding offers much to other academics and decision makers operating within the region (Babbie, 2013; Bernard, 2011).

By providing findings back to the community, this research contributes to local decision making in a number of ways. First, it offers a holistic understanding of the consequences of small niche tourism development within the community. This may help community members step outside of "echo chambers" that can lead to more divisive politics around development decision-making. Secondly, an accurate depiction of processes and cultural understanding that can be used to "set an example" for community development in the region. This will allow the lessons learned in Petersburg to come full circle via bridging links to improve tourism-related development decision-making (i.e., adaptive capacities) in

regional neighboring communities.

Based on major finding of this research, various steps are recommended for Petersburg. Most importantly, the ad hoc community should be made permanent to continue to foster communication of what actions are not only feasible, but which are effective at achieving community defined sustainable development goals. Furthermore, connections should be fostered between community representatives and tourism industry actors that are currently operating in Petersburg as well as prospective tourism institutions. Valuable knowledge can be communicated to obtain a shared understanding for both tourism representatives and tourists to adhere to local norms while building the foundation of social capital -- trust. Finally, a large challenge for emerging destinations is the ability to be pro-active about tourism development. In stark juxtaposition, Petersburg has and should continue to take preemptive actions towards self-determination to maintain identity in a "town built by fish".

Regional and federal institutions as well as private tourism institutions gain a holistic understanding of their role in local community development through this research. As evidence indicates, the actions taken by the USFS can have dramatic impact upon local communities, transforming the socio-ecological system upon which they are embedded within. Whether it be natural resource extractive or non-extractive industries, the economies of Southeast Alaska are reliant upon a sustainable ecological system (Bunten, 2014). As noted through formal and informal interviews, decision makers within the Petersburg Ranger District and Recreation managers at the forest level understand the magnitude of their decisions. However, as this is a national forest, prioritization of the local communities over national interests can be difficult. With a new understanding of the

consequence's tourism development can have on livelihoods in natural resource-based communities, better decision making can occur through increased linkages between resource managers and the local community. Furthermore, the action that increase the local community's adaptive capacity should be prioritized as spillover effects may benefit forest sustainability.

Final Thoughts

Global environmental change will continue to showcase the embeddedness of local communities through the interconnectedness of social and ecological systems. Natural resource dependent communities are impacted by climate change in often peculiar ways in which local residents may be left with a feeling of helplessness. Yet, there are still opportunities for self-determination through the social connectedness of what binds residents together. By understanding the "lived experiences" of local communities, this research demonstrates the value of ethnographic research in understanding the dynamics of tourism development in communities whose identities are intricately tied to the sustainability of their natural environment.

By invoking research methods that aim to understand the process of development, this research identifies opportunities to link theory often claimed to address such issues; 1) resiliency theory and the concept of adaptive capacity, and 2) development theory and the concept of social capital. The implications of this theoretical integration are broad and should not be siloed within the confines of academia, but the focus of this thesis is the theoretical contributions made to the field of tourism studies. Here, both concepts remain underutilized in their potential for understanding the consequences of tourism in promoting

human and environmental wellbeing. As the result of tourism can be both prosperity and peril for local communities, the need for research to understand the ways in which tourism can be influenced to promote sustainable outcomes that represent the collective identity of the community remains urgent.

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Appendix

Semi-structured Interview Guide

Interviewer: Ryan Naylor

Interview Location:_____

Date:_____2019

Interview #:_____

Introduction Script:

Hello, my name is Ryan Naylor and I am a master's student at the Penn State University. I am conducting in-depth interviews to understand how tourism impacts your life as well as your communities. I wanted to interview you because I believe you have information that can help me understand. The purpose of this interview is to gain a better understanding of how tourism creates challenges or opportunities to sustain your way of life. I want to understand the world from your point of view. I want to understand the meaning of your experiences and be able to explain them as you explain them. I am the student and you are the teacher and I only wish to learn what you have to say. May I record this conversation? I want to focus entirely on what you have to say.

Demographic Information

1. How long have you lived here?_____
2. Do you live with anyone else?_____
3. Of what ethnicity do you identify as?_____

Livelihood Information

I want to start this interview by learning about how you make your living, whether that be for your personally or how you provide for the people you care about. I am interested in your livelihood and what enables you or disables you from doing what you need to do to survive.

1. How would you define what a livelihood is?

   Include getting out the state,

   Decision made in Juneau

2. What is your current livelihood to provide food or money to you or your family?

   a. Is this the only livelihood you have?

   b. How many days?

3. How long have you had this livelihood?

4. Why did you choose this livelihood?

5. How did you learn the skills to perform your livelihood?
6. What resources do you need in order to perform your livelihood?
7. How does your history affect your livelihood?
8. How does the history of Petersburg affect your livelihood?
9. How does your culture affect your livelihood?
10. What role does the government play in your livelihood?
11. What are some of the most important changes to your livelihood?
12. What are some of the other factors that play into your livelihood?
13. What are the largest challenges of this livelihood?
14. What are the largest opportunities?
15. How long you do you think you will have this livelihood?
    a. How long would you want to keep this livelihood?

Community Livelihoods

I want to now transition the conversation into Petersburg Livelihoods. I want to understand how other people in Petersburg choose their livelihoods and provide for themselves and the people that they care about. Furthermore, I want to understand how this has changed over time and how you would want it to change into the future.

16. Why did you decide to remain in Petersburg?
17. How would you describe this village from when you were a child or when you first moved here?
18. What changes have you seen since you've lived here?
    a. How would you explain the causes of these changes?
    b. If negative, what would have helped to make those outcomes better?
    c. How did this effect what people were doing for livelihoods?
19. What are some of the current ways people make a livelihood here in Petersburg?
20. How do people decide how they are going to make a livelihood here?

a. What factors go into choosing their livelihood?

21. What do you value the most about living here?
22. What do you value the least about living here?
23. What are some of the largest challenges for this community?
24. What are some of the largest opportunities for this community?
25. What would you hope for the community in the future?
    a. What livelihoods would you like to see?
    b. What are your biggest fears or concerns for the future of this community?

Tourism Livelihoods

I would like to thank you for your time thus far. I want to know transition into the final part of the interview. I would like to know how tourism has or has not changed your livelihood and the livelihoods of Petersburg. I want to know how the effects of tourism have changed over time and how you might expect tourism to affect your livelihood and other livelihoods in the future.

26. When did tourism start in Petersburg?
27. When did tourism start becoming an important part of life in Petersburg?
    a. Was it a quick or long process?
    b. Was there an event or occurrence that made you notice?
    c. What were sorts of tourists you first noticed? What activities were they doing?
28. How has tourism changed in Petersburg?
    a. How have the type of tourists changed?
    b. How have the activities of tourists changed?
    c. How have the locations of places tourists visit changed?
29. How does the tourism in southeast Alaska affect your opinion of tourism?
30. How has tourism affected your livelihood?
31. How does tourism affect the resources to perform your livelihood?
32. How does tourism affect your culture?

33. What are some of the other ways tourism personally affects your livelihood?
    a. If negative, what would have helped to make these affects better?
34. What are some of the worst way's tourism could change to affect your livelihood?
35. What are some of the best way's tourism could change to affect your livelihood?
36. What would be the characteristics of tourism for you to consider incorporating it into your livelihood?
37. How does tourism affect the livelihoods of Petersburg?
    a. What livelihoods does tourism benefit the most?
    b. What livelihoods does tourism benefit the least?
38. How does tourism affect the different levels of government?
39. What aspects of tourism most concern you?
    a. Most significant effects
40. What aspects of tourism are the most appealing?
    a. Most significant effects
41. What characteristics of tourism must change in the future for tourism to become a more common livelihood?
    a. Do you see this livelihood as being sustainable?
42. What are some of the best ways that the development of tourism can benefit your livelihood?
43. What are some of the best ways that the development of tourism can benefits the livelihoods of Petersburg?

Last year, a Viking Cruise ship representative arrived in Petersburg suggesting an arrival of a possible cruise ship in 2020 that would dock in the Frederick Sound outside of Petersburg carrying approximately 900 passengers.

44. How would a cruise ship of that size affect this community?

45. What would help make this situation the best possible outcome?

46. What would make this situation the worst possible out