

Narratives of Graying, Change, and Resilience:

A Narrative Policy Framework analysis of 'graying of the fleet'

by

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Abstract

Commercial fishing is deeply embedded in the economy and culture of many coastal communities in Oregon. This study examined the impact of the ‘graying of the fleet’ phenomenon (Graying; the increase in the average age of commercial fishermen) on community resilience in coastal communities. This paper utilizes qualitative methods and the Narrative Policy Framework, and draws on rural sociology to examine the role of macro-level concepts of rurality in the perceptions and portrayal of Graying and resilience by coastal community leaders. I find that Graying is a subplot to more salient policy problems facing the commercial fishing industry, natural resource industries, and rural communities. Nostalgic and past settings were more commonly connected with construction of local culture than with policy problems. Rural idyll or “frontier ideal” concepts play a role in these narratives. Newcomers’ and native-born participants’ narratives differed in several narrative elements, including temporal and place setting, solutions, and plot. Graying is concerning to members of the coastal community of place when considering the fishing industry as a whole, but is not necessarily perceived as happening in all port communities, and is not the most concerning problem to these participants. Rather than directly addressing Graying, actions that address the phenomenon through policy solutions to other related problems would likely be beneficial to both the impact of the policy narrative and to the effectiveness and acceptability of solutions to Graying. Specific actions that could mitigate Graying include educational, financial support, and communication approaches. The theoretical implications and recommendations for future research are discussed.

Key Words

Commercial fishing, graying of the fleet, resilience, Narrative Policy Framework (NPF), nostalgia, rurality, rural sociology

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Image: Young Anna gestures while lecturing to her parents, brother, and cousin, who probably saw graduate school in her future before she even knew what it was.

Introduction

The commercial fishing industry has always experienced change driven by environmental and sociopolitical drivers, but change has been particularly dramatic since the mid-20th century due to new technology, globalization of markets, and regulatory change (Cramer, Flathers, Caracciolo, Russell, & Conway, 2018). Changes and disruptions to the industry will likely continue due to improving technology, changes in ocean conditions and climate, and social and economic patterns affecting rural communities. One such change is the shrinking number of youth entering the fishing industry and increasing average age of owners and operators. The “Graying of the Fleet” (“Graying”) phenomenon may be related to policy and management decisions, and it may impact the resilience of the fishing industry and fishing dependent communities.

Graying of the Fleet, or the increasing average age of fishermen, is occurring in some fleets in Alaska (Carothers, 2015; Carothers, Lew, & Sepez, 2010), the Pacific Groundfish fleet (Caracciolo, 2017; Carothers, 2015; Flathers, 2017; Russell, Sparks, Arias-Arthur, & Varney, 2014), and preliminary evidence suggests it is also happening in specific places in Oregon, such as Newport and Port Orford, Oregon (Caracciolo, 2017; Carothers, 2015; Flathers, 2017; Russell et al., 2014). Evidence from Alaska suggests that a major driver of Graying is the further closing of the fishing commons through quota systems or similar mechanisms for privatization or “rationalization” (Carothers, 2015; Cramer et al., 2018). Additional drivers may be related to broader social and economic changes such as the out-migration of youth from rural communities, increased pressure for youth to attend college, and decreased support for technical or vocational education in high schools. While it is not yet clear to what extent these drivers impact the fishing industry, they are popular complaints in the media and have received some attention as both drivers and outcomes of rural “restructuring,” including changes in agriculture and forestry (Nelson, 2002).

As research on drivers of Graying continues, there remains a gap in our understanding of how the meaning of the issue is constructed. This essay expands the qualitative investigation of Graying to the construction of Graying as a policy problem in two geographical locations on the Northern Oregon Coast. Oral histories and semi-structured interviews with fishing families (“community of interest”) and with community leaders within “community of place” were conducted in port communities. I approach this analysis through the lenses of the Narrative

Policy Framework (NPF) and the nostalgia inherent in constructions of rurality. These lenses contextualize the findings in theories of the policy process, and in the experiences and processes of rural communities experiencing similar changes in the natural resource industries on which they rely. Doing so contributes to the development of the NPF, but can also provide practical insights into challenges to communicating about graying of the fleet or other coastal, rural policy problems. It also contributes to policy process theory and rural studies by linking the two fields through the nostalgia and the NPF. This link further develops two elements of the NPF that have received little attention: macro-level narratives and temporal setting.

In the following section I review existing research on Graying of the Fleet and resilience in coastal communities, and an overview of fisheries management and policy change as the context in which policy narratives about Graying are constructed. I then introduce my theoretical frameworks of NPF and rurality, with particular attention to the role of nostalgia in concepts of rurality. This background is followed by an elaboration on my research questions and methods, results and discussion, and finally policy implications.

Literature Review and Background

A. Graying of the Fleet and Resilience

Researchers have observed a decrease in the number of youth entering the commercial fishing industry, and an increase in the average age of commercial fishermen (Carothers, 2015; Carothers et al., 2010; Russell et al., 2014). This phenomenon has been termed ‘graying of the fleet.’ Graying of the Fleet arose as a theme in a NOAA report by Russell et al. (2014) and by Calhoun (2015), and was then investigated in a pilot project in Newport and Port Orford, Oregon (Caracciolo, 2017; Cramer et al., 2018; Flathers, 2017). The pilot study involved oral history interviews with commercial fishing families and others directly involved in the commercial fishing industry (“community of interest”), as well as with leaders in the broader Newport and Port Orford communities who were not necessarily directly involved in the fishing industry (“community of place”). While Caracciolo (2017) found that fishing families were concerned with Graying as a threat to the industry and community resilience, Flathers (2017) found less concern among leaders in the broader communities of place.

Graying of the fleet is a concern to the fishing industry in part because there may be a loss of institutional knowledge if young people do not enter the industry at a time when they can learn from older, long-time fishermen. It is also a question of equity and career opportunities for youth because it is a sign that there is less opportunity to advance from crew member to captain or owner (Carothers, 2015; Russell et al., 2014). Both of these potentialities could weaken the commercial fishing industry. For instance, Russell et al. (2014) identified a concern among commercial fishermen that inexperienced, young fishermen who have not received the institutional knowledge from older fishermen will not be able to glean as much profit or productivity from the fishery.

These processes could in turn affect the resilience of local communities in which fishing is important to the economy and culture. In natural resource dependent communities, considering connections between the several dimensions of resilience is particularly important because of the strong link between livelihoods and natural systems (Carothers, 2015; Carothers et al., 2010; Clarke & Mayer, 2017; McLeod & Leslie, 2009). Resilience—the ability to absorb, respond to, or recover from disruption (Adger, 2000; Oregon State University, 2017)—can be specifically ecological, economic, psychological, infrastructural, or social, or it can be a holistic amalgamation of those dimensions (Adger, 2000; Clarke & Mayer, 2017; Oregon State

University, 2017; Sherman, 2006). Research on economic resilience suggests that economic diversity is among the most important characteristics for a resilient local economy. A less profitable fishing industry or shrinking fleet (e.g. from consolidation) could contribute to a decrease in local economic activity, and weaken one “leg of the stool,” to borrow an analogy from one Tillamook community leader interviewed in this research. Major economic sectors, especially those based on natural resources, are also important to social or community resilience. Clarke and Mayer (2017) provide evidence from an analysis of resilience following the Deepwater Horizon oil spill that the importance of the local fishing industry contributed to strong attachment to place and social capital, which in turn contributed to community resilience.

In the face of increasingly rapid environmental, social and economic change and continuing policy change, resilience has become of critical importance to communities and policymakers. Our understanding of resilience in coastal communities could be improved through understanding the construction of meaning around changes, as Clarke and Mayer’s (2017) findings on the relationship between commercial fishing, attachment to place, and resilience suggest. While some research has been done on the drivers and impacts of Graying, little to no research has been done on the construction of Graying. My research offers a framework to fill this gap by analyzing interviews using the Narrative Policy Framework and the lenses of rurality and nostalgia. I also contribute to the growing body of information about the Graying phenomenon by expanding the geographical region of the research to the northern Oregon coast.

B. Brief History of Fisheries Management

Fisheries management is one of the major drivers of Graying according to Carothers (2015, 2010). Fisheries policy and management has evolved over the years, particularly with respect to understanding the interconnectedness of ecological, economic and social systems. Some of these changes are related directly to Graying as drivers or in guiding the study and response to Graying. They might also impact the construction of Graying as a problem. The history of fisheries policy and management forms the context in which stakeholders, from locals to policymakers in Salem or Washington, D.C., construct a narrative about Graying as it relates to their own values, emotions, biases, and perspectives on other issues their community is facing or has faced. In any policy problem, the context in which the problem occurs shapes the construction of meaning, communication, and policy responses that occur. In the case of fisheries in Oregon, prominent historical trends or events could influence the perception of problems

facing the commercial fishing industry among local stakeholders and decision-makers at multiple levels. Graying of the fleet occurs in the context of concerns about overfishing in the 1970s to early 2000s (Blackford, 2009), as well as the expanding scope of what fisheries policy and management is concerned with (McLeod & Leslie, 2009). An increased focus on sustainable fish stocks in the 20th century is now being expanded further to include social and economic sustainability or resilience. This research on Graying and community resilience contributes to a better understanding of how fisheries policy and management interacts with local social and economic systems.

Fisheries management has changed significantly since the mid- to late-20th century as governing institutions turned their eye toward sustainability. Global commercial fish harvest spiked between 1950 and 1970, from 19 to 64 million metric tons (Blackford, 2009.) This spike prompted concerns about overfishing, especially with the decline of the Atlantic Cod fishery in the 1990s (Blackford, 2009). Although concerns about overfishing are less pressing currently, the history of dramatic declines in certain valuable fisheries could have a lasting impact on public perception of commercial fishing. Recent movements in sustainable food systems and animal welfare even has the potential to maintain concerns about fish stocks regardless of whether stocks are actually under threat. The amount and visibility of imported fish could similarly heighten public concerns through, for example, the Monterey Bay Aquarium “Seafood Watch” campaign (“Seafood Watch - Monterey Bay Aquarium’s Sustainable Seafood Program,” n.d.). Both the Environmental Protection Agency and the National Oceanic and Atmospheric Administration were founded in 1970, and in 1976 the Magnuson Fishery Conservation and Management Act (MFCMA) established a new fisheries management policy structure (Blackford, 2009; Shea & Theberge, 1999). MFCMA marked the beginning of a trend in fisheries management toward neoliberal models of management (Pomeroy, Hall-Arber, & Conway, 2015), including total allowable catches on the fishery scale, and limited entry permits or quotas on the individual scale. Limited entry permits were intended to limit fishing by restrictions on gear type, size, season, or other characteristics of the fish and fishery. “Rationalization,” or the implementation of quota systems, was intended to mitigate the tendency for limited entry permits to incentivize a race to harvest as much fish as possible in a short period of time. Quotas restrict the amount of fish each permit holder can harvest (Blackford, 2009; Cornell Law School, n.d.).

Under MFCMA, newly established regional fisheries management councils were granted responsibility for developing management plans. The specific standards for management depend on location and species, but all councils must manage in accordance to National Standards that guide evaluation (NOAA Fisheries, 2018). Individual fishing quotas (IFQ), also known as individual transferrable quotas (ITQ), are among the most salient management tools. Limited entry permits like IFQs began in the 1970s with salmon and herring in Alaska, but were rolled out at different times in different fisheries: Alaskan halibut and sablefish in the 1990s, ground fish along the West Coast of the contiguous U.S. in 2011, etc. (Carothers, 2015; Pacific Fishery Management Council, 2017). IFQs have received attention in part because of unintended social consequences. While IFQs are often identified as a successful management solution to depleted fish stocks (e.g. Lubchenco, Cerny-Chipman, Reimer, & Levin, 2016), they can exacerbate barriers to entry for populations who are less likely to have access to financial capital (e.g. Carothers, Lew, & Sepez, 2010). In the Alaskan king crab fishery, establishment of an IFQ system in 2005 “led, as expected, to consolidation” and increased costs, but its conservation benefits were still unclear several years later (Blackford, 2009, p. 252). Youth and crew members are among the most negatively impacted stakeholders from rationalization due to increased barriers to entry and limited opportunity for advancement (Carothers, 2015).

According to a study by NOAA (Russell et al., 2014), 64.6% of permit holders in the Pacific Groundfish Fishery were over the age of 50 in 2012, an increase from 56.3% in 2010. The same study also found that only 5.8% of permit holders were 30 years old in 2012, compared with 10.4% in 2010. It is yet to be determined whether Graying is occurring in specific communities on a smaller scale, and whether it is occurring in other fisheries, especially those that are not subject to quota-based management systems.

It is important to note that not all fisheries are managed by limited entry permits. In fact, ground fish is the only quota-managed fishery in Oregon. Crab, for instance, is managed by sex, size, and season in Oregon, Washington and California (Oregon Department of Fish and Wildlife, 2018). Another example that is particularly pertinent to this research is the regulation of gillnetting in Columbia River salmon fisheries. In 2012, Oregon Governor John Kitzhaber initiated a process that would reduce the use of gillnets in the mainstem Columbia River, transitioning to off-channel areas for commercial fishing while “prioritiz[ing] selective recreational fisheries in the mainstem” (Oregon Department of Fish and Wildlife, n.d.). This

policy was instituted just one year after quotas were established for the Pacific Ground Fish Fishery, and was followed one year later by an *Oregonian* article discussing the negative economic impacts of the rules themselves and the uncertainty of the policy process (Shorack, 2013). The gillnetting “ban” was highly controversial and adversarial, with sports fishermen and some environmental groups in support and commercial fishing groups in strong opposition. Because of the differing costs of gear and, where applicable, permits, such different management approaches could impact if and how Graying occurs in different communities, gear types, or even fisheries. Management decisions also form important context for the way in which communities construct subsequent fishing-related policy problems.

Other broad changes in fishery management have been driven by increasing attention to the importance of managing ecosystems holistically, rather than by species or abiotic component, and of the interconnectedness of human and “natural” systems. Ecosystem Based Management (EBM) is an approach that embodies this shift. EBM emphasizes place specificity, connections (human-nature, local-regional, ocean-climate, etc.), making tradeoffs explicit, and embracing and preparing for change (McLeod & Leslie, 2009). The Pacific Fisheries Management Council (PFMC) does specifically draw on EBM in its Pacific Coast Fishery Ecosystem Plan (Pacific Fishery Management Council, 2017). EBM principles are also evident in MFCMA Amendments, especially National Standard 8, which was added in a 1996 Amendment. National Standard 8 states: “Conservation and management measures shall, consistent with the conservation requirements of this Act [...] minimize adverse economic impacts” on fishing dependent communities, and provide for “continued access to the fishery” (NOAA Fisheries, 2018).

Fisheries management, both current and past, forms part of the context in which Graying occurs. This context influences both the manifestation of Graying itself (e.g. as an unintended consequence of quotas), as well as the construction of Graying as a social or policy problem. Fisheries conditions and management during periods like the 1970s or 2012, in which fisheries were a salient problem, could still influence perceptions of commercial fishing and thus of Graying among stakeholders with limited knowledge about current commercial fishing practices and conditions. In addition to the history and regulatory framework in which commercial fishing is practiced and perceived, the construction of Graying as a problem is influenced by cognitive processes and biases, and broad social paradigms such as rurality.

Theoretical Lenses

A. The Narrative Policy Framework

One lens for analyzing the construction of policy problems and understanding the role of context is the Narrative Policy Framework (NPF), which seeks to explain the role of “policy narratives” in the policy process. Policy narratives are essentially the stories policy actors tell as they communicate about a policy problem, and include at least characters (e.g. victims and villains) and a policy or policy problem. Other narrative elements that are usually, but not necessarily, part of a policy narrative include setting (e.g. regulatory framework, evidence, physical setting), plot, and a “moral” of the story (i.e. proposed policy solution) (Shanahan, Jones, McBeth, & Radaelli, 2018). It is important to note that NPF rests on social constructionist assumptions such that the “heroes,” “villains,” and “victims” identified in policy narratives are individuals, groups, or abstract forces that the “narrator” seems to perceive as heroic, villainous, or victimized. One individual’s or group’s policy narrative may identify a particular entity as a hero, while a competing narrative identifies the same as a villain.¹

Researchers employing NPF most frequently analyze narratives on the level of individuals (“micro”) or groups (“meso”), but can also address the broader cultural or institutional narratives (“macro”) within which meso-level policy debates take place (Shanahan, Jones, McBeth, et al., 2018). Underpinning each level is the *homo narrans* model of the individual, which, among other assumptions, proposes that humans are boundedly rational, rely on heuristic shortcuts for decision making, and process information first through emotion and “system 1” automatic cognition (Table 1). Micro-level NPF research focuses on how individuals construct, understand, and are influenced by policy narratives, thus revealing drivers of public opinion on policy issues. On the meso-level, *homo narrans* operates in aggregate as distinct institutionalized groups, charismatic individuals, coalitions, or “constellations of actors” (Table 2) (Shanahan, Jones, McBeth, et al., 2018). Meso-level hypotheses primarily relate to narrative strategies such as expansion or contraction of costs and benefits, angel shift and devil shift, and the degree of “narrativity”—i.e. the extent to which narrative elements are used (Table 3) (Shanahan, Jones, McBeth, et al., 2018). Several of the micro- and meso-level NPF assumptions

¹ It is not the purpose of this research to determine the truthfulness of such characterizations, although I also seek to examine qualitative evidence of the actual drivers and impacts of graying. of the fleet.

and hypotheses become particularly relevant to this study when considering the cognitive effects of nostalgia, and will be discussed in further detail below.

Finally, macro-level narratives are the context in which meso-level policy debates take place, and also inform System 1 thinking and heuristics on the micro-level. NPF researchers have studied macro-level narratives through, for example, meta-narrative theory, institutional theory, and cultural theory (Shanahan, Jones, McBeth, et al., 2018). I approach the macro-level through the lens of rural sociology, and specifically sociological findings on the construction of rural identity by both rural insiders and outsiders (e.g. the media, tourists, retirees who have moved to rural locations). The theme of nostalgia that recurs through this vein of rural sociology links the macro- and micro-narratives about rural issues such as changes in commercial fishing fleets in rural coastal communities.

Table 1. Homo narrans model of the individual. The Narrative Policy Framework proposes several characteristics of the way humans process information, thus forming the Homo narrans model of the individual. Adapted from Shanahan et al. (2018, p. 181-183)

PROPOSITION	DESCRIPTION
Boundedly rational	Decisions are made under limited time and information, leading individuals to “satisfice” (settle for an imperfect alternative)
Heuristics	“Individuals rely on information shortcuts to process information and to facilitate decision making.” Heuristics are based on “experience, expertise and training, and biological biases.”
Primacy of affect	Affect “is the positive to negative value that an individual ascribes to stimuli” and precedes reason.
Two kinds of cognition	Most cognition occurs as System 1 cognition: “unconscious, involuntary, and automatic thought processes that we are either born with [...] or learn through prolonged practice.” Affective cues can engage System 2 : effortful cognition that “focuses attention on cognitively cumbersome tasks that are beyond the capacity of System 1.”
Hot cognition	Unfamiliar objects and concepts will be associated with familiar concepts or objects, and thus with the System 1 affect-laden understanding of those concepts or objects.
Confirmation and disconfirmation bias	Confirmation bias: individuals place more weight on evidence that is congruent with their priors. Disconfirmation bias: incongruent information is “counterargued and takes longer to process.”
Selective exposure	“Individuals select sources and information that are congruent with what they already believe.”
Identity-protective	“Selective exposure, confirmation bias, and disconfirmation bias

cognition	[...] are used by individuals in a way that protects their prior identity, or who they already understand themselves to be.”
Primacy of groups and networks	Networks and groups “play a vital role in helping individuals assign affect to social and political concepts.”
Narrative cognition	<p>“Narrative is the primary means by which human beings make sense and situate themselves in the world, and in doing so narrative renders human existence meaningful.”</p> <p>“Narrative is the preferred heuristic [...] because it provides essential linkages between System 1 and System 2 cognition.”</p>

Table 2. Levels of analysis in Narrative Policy Framework studies. Policy narratives operate at multiple levels: micro (individual), meso (group), and macro (societal). Researchers most frequently analyze narratives on the micro and/or meso level. From Shanahan et al., 2018 (p. 3).

Level of Analysis	Generic Research Question	Examples
Micro	What influence do narratives have on individual preferences and cognitions? What influence do narratives have on individual decision making?	What is the effect of different types of causal mechanisms on an individual's policy opinions when presented with a congruent and breaching narrative? (Shanahan, Adams et al., 2014)
Meso	How do groups construct policy narratives? What is the effect of policy narratives in the policy process?	In Indian nuclear power debates, do winning and losing coalitions employ different narrative strategies? (Gupta et al., 2014) During the ArabSpring, how were expert and legislative narratives deployed and to what effect? (O'Bryan et al., 2014)
Macro	What are the conditions under which macro level narratives develop and change?	How did the education policy change after World War II and how did the macro narratives affect policy learning? (Veselkova & Beblavy, 2014)

Table 3. Narrative elements and examples relating to commercial fishing and Graying of the fleet. The Narrative Policy Framework analyzes policy narratives based on the following elements. The elements can be used in coding data to understand how policy actors frame different elements, or to analyze the degree of “narrativity.” Adapted from Shanahan et al. (2018).

ELEMENT	DEFINITION	EXAMPLE
Setting	Context of the problem including constitutional or legal boundaries, geography, and scientific evidence.	-Global fishery depletion from overfishing. -The Endangered Species Act. -Increasing average age of fishermen.
Characters	“Victims who are harmed, villains who do the harm, and heroes who provide or promise to provide the relief from the harm” (p. 176).	-Some individuals perceive federal lawmakers to be villains for imposing restrictions on fisheries.
Plot	The “arc of action” relating characters, settings, and events.	-Federal (villain) passage of the Magnuson-Stevenson Fisheries Conservation Act (event, setting) contributed to some fishermen retiring (victim).

Moral of the story	Policy solutions	<ul style="list-style-type: none"> -Diversify local economies to minimize “ripple-out” effects from a diminished commercial fishing industry. -Support small commercial fishing businesses and beginning fishermen through community quota purchases or financial assistance.
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B. Rurality

Osbaldiston (2017) discusses “a transition from a coastal space that was seen as important for production or industry, through to one that is bound to ideals of consumption today” (p. 3). He draws a parallel with inland rural communities whose economic and social transitions have been studied extensively, particularly as relates to declines in natural resource industry employment and increasing tourism to rural areas (Brown & Schafft, 2011; Osbaldiston, 2017). In addition to transitions in rural communities themselves, Bell (2007) argues there has been a transition in rural studies in the U.S. from material definitions of “rural” based on population and distance from urban centers, towards postmodernist, constructivist perspectives. In both approaches, rurality is often defined in contrast to the urban (Brown & Schafft, 2011; Fitchen, 1991).

Rural sociology and European rural studies, however, have long been interested in the construction of rural identities by both rural residents and relative outsiders such as tourists and representation in pop culture and news media (Brown & Schafft, 2011; Bunce, 1994; Fitchen, 1991; Golding, 2012; Halfacree, 1995; Stedman, 2003, 2006; Wulff, 2007). Research on what I will call “insider” rural identity construction is informed by theories on attachment to place and livelihoods (Brown & Schafft, 2011; Fitchen, 1991; Golding, 2012; Scoones, 2009; Stedman, 2003, 2006). Place attachment can also be found in “outsider” or “newcomer” constructions of rurality (e.g. Fitchen, 1991; Stedman, 2006). However, outsider and macro-scale perceptions of rurality largely driven by romanticized notions of rural places as escapes from modern life, although rural people are sometimes negatively stereotyped as ignorant and prejudiced (Bunce, 1994; Fitchen, 1991; Halfacree, 1995; Monnat & Brown, 2017; Peterson, McBeth, & Jones, forthcoming). Insider, newcomer, and outsider points of view are all relevant to policy narratives about graying of the fleet as micro understandings of rurality are influenced by macro-level, outsider constructions of rurality. For the sake of conciseness, “rurality constructions” discussed here include all three perspectives unless otherwise specified.

Insider rural identity is studied most extensively through the lens of “sense of place,” but there has also been considerable attention to livelihoods and socioeconomic class-based frameworks, and political alienation (Eriksson, 2017; Fitchen, 1991; Golding, 2012; Hochschild, 2016; Scoones, 2009; Stedman, 2003, 2006). Stedman (2003) describes place as the physical setting and human experience or interpretation of that setting, and sense of place as comprising satisfaction with place, attachment to place, and meanings associated with place. He finds that in a Midwest lakeside town, meaning differed depending on development, independent of attachment: “more developed lakes are less likely to be ‘escape places,’ and more likely to be ‘social places’” (Stedman, 2003, p. 682). He also finds that a sense of “loss of place” can come from changing meanings, which is consistent with Fitchen’s (1991) observation that “the loss of specific farms, even if agriculture as a whole survived, threatened a basic plank or local collective identity” (p. 248) in a rural dairy-producing community.

More recently, Hochschild’s (2016) book Strangers in Their Own Land has become a popular example of a vein of rural sociopolitical studies examining class and political alienation. While this body of literature is less explicitly about how rural people would define rurality, it is significant to the urban-rural dichotomy that colors policy narratives among rural insiders and outsiders alike. Eriksson (2017), for instance, found that political alienation was a mediating variable between place of residence and attitudes toward wolf policy, and that rural residents felt a greater sense of alienation. This dynamic was caused in part by how “wolf policy becomes perceived as an extension of urban ideals and values,” and thus becomes “an issue of rural identity” (Eriksson, 2017, p. 1375).

Newcomers to rural areas (i.e. people who moved to rural areas in adulthood) are an interesting subject of study in rural identities literature because they are not quite insiders, nor are they quite outsiders. In a study on urban gentrification that has implications for rural identities via sense of place, Ocejo (2011) found that “early gentrifiers” adopted positions and narratives resisting changes to the local community, including further gentrification. These narratives included ones of nostalgia that served “to create new identities that establish them [the early gentrifiers] as significant actors in the place” (p. 287). Golding (2012) found that, while rural community leaders arrived at similar positions about growth management policy, these positions were rooted in differences in “how leaders identified with the specific rural place they live, and how they identify with rural culture more generally” (p. 1029). Such meanings were

informed in part by newcomer status and family history in the area (Golding, 2012), highlighting the importance of both macro-narratives and nostalgia to sense of place or place.

Furthermore, Golding's (2012) findings are consistent with Fitchen's (1991) statement that "'newcomers' may see the landscape primarily visually, as scenery; 'local people' may perceive not only a visual but a social landscape" (p. 261). Second home owners are similarly neither insiders nor outsiders, and also tend toward more visual or physical landscape-based meanings than year-round residents (Stedman 2006). Stedman (2006) argues that these newcomer and seasonal residents' meanings are important to understand considering the abundance of communities experiencing or with a long history of transitions to recreational or tourism-based economies.

Golding's (2012) small study on differing meanings and identity within a rural coalition opposing an urban growth management policy provides an excellent transition and link between insider and outsider constructions of rurality. The coalition in this study included residents who had moved to the area as well as those that were born and raised there, allowing for a comparison of how these two sub-groups identified with their community and how that related to their views on urban growth. Golding (2012) finds that "land use politics can have more to do with individuals' internalized perceptions of place than with opinions about land use" (p. 1040), and that perceptions of place differed between relative newcomers and native-born residents. Although these differing perceptions ultimately aligned with the same position on the policy in question in this case, that would not necessarily occur for other policies or in other locations. Golding (2012) notes that "rural identity is engendered by the sociocultural significance of being rural" (p. 1031), and that this aspect of rural identity has been under-studied among contemporary rural scholars. An example of this connection between macro and micro is one of his interviewees whose newcomer rural identity "is tied to a set of rural ideas without necessarily being tied to a specific rural place. His rural ideas take root in opposition to urban society, represented by government and bureaucracy" (Golding, 2012, p. 1037).

The set of rural ideas referenced, while not fully elaborated upon in Golding's (2012) article, are likely informed by dominant urban and media images of rural places and natural resource occupations as romanticized, pure, and in contrast with "the ills of modern life." This paradigm is called the "countryside ideal" or "rural idyll" (Bunce, 1994; Halfacree, 1995; Meek, 2006; Winchester, Linscheid, & Schmidt, n.d.). The rural idyll frames rural places as "escape

places” (Stedman, 2003) from urban life, and as a safer place to raise children (e.g. Meek, 2006) or recreate (e.g. Bunce, 1994). At the same time, the rural idyll is underpinned by a sense of nostalgia that sets rural places in the past by emphasizing the history of “traditional” rural livelihoods and national history or identity, particularly in the Western U.S. (Bunce, 1994; Nelson, 2002; Robbins, Meehan, Gosnell, & Gilbertz, 2009). People migrating into rural areas, either temporarily as tourists and second homeowners or permanently, may see rurality as a step away from modernity, back to a more pure or healthy way of life. Long-time rural residents may see more nuance and variation in rurality (Meek, 2006), but may experience personal nostalgia relating to their own or their networks’ experiences in natural resource occupations. While the historical nostalgia of outsiders and newcomers fosters their affinity for or attachment to rural places, the personal nostalgia of rural insiders may contribute to resentful or resistant attitudes toward certain changes and symbols of change (Besser, 2009; Crowe, 2011; Golding, 2012; Nelson, 2002).

C. Nostalgia

The themes of change, aversion to change, historical preservation and restoration, and outsiders’ association of rurality with history imply that nostalgia is likely an important cognitive process in rural sociology and rural policy narratives (Besser, 2009; Bunce, 1994; Grossmann & Thaler, n.d.; Ocejo, 2011; Stedman, 2006). Nostalgia is also pertinent to NPF in its connection to plots of decline, temporal setting, and several characteristics of *homo narrans*. Comparing the propositions about *homo narrans* (Shanahan, Jones, McBeth, et al., 2018) with findings on nostalgia from psychology and other fields demonstrates that the functions of nostalgia are closely aligned with the way people, as *Homo narrans*, process information like policy narratives (Table 4). At the most basic level, *H. narrans* proposes the primacy of affect, which would include the bittersweet affective state of nostalgia. In addition, nostalgia’s role in confirming priors about views of the self and one’s group, learning from or coping with the past, and other processes highlight the potential importance of nostalgia in policy narratives. Analyzing the role in policy narratives could provide insights into the construction and interpretation of narratives. These connections may be one reason advertisements and political messaging that evoke nostalgia are effective. While plot (e.g. improvement, decline) and temporal setting (past, present, future) are clearly relevant to nostalgia, these elements have not been adequately

incorporated into NPF. This section provides a brief overview of definitions, triggers, and effects of nostalgia.

Merriam-Webster defines nostalgia as “the state of being homesick,” as informed by the origins of nostalgia research on homesick soldiers, but also “a wistful or excessively sentimental yearning for return to or of some past period or irrecoverable condition.” The latter definition hints at the breadth of triggers for and types of nostalgia, which received renewed attention in psychology research with the development of Batcho’s nostalgia index in 1995 (Batcho 1998). In psychology, nostalgia has been described as “a blend of cognitive (memory) and affective (bittersweet feelings) processes” (Batcho, 1998, p. 412). In addition to yearning, “restorative nostalgia,” Baldwin, White, & Sullivan (2017) identify “reflective nostalgia,” which contributes to “understanding how the present can be improved by knowledge of the past” and “forg[ing] a relationship between individual and collective memory” (p. 444). The three main categories of nostalgia, whether restorative or reflective, are personal, collective, and historical (Baldwin et al., 2017; Batcho, 1998; Bradbury, 2012; Ocejó, 2011; Routledge, Wildschut, Sedikides, Juhl, & Arndt, 2012; Stern, 1992; Wildschut, Sedikides, Arndt, & Routledge, 2006).

Personal nostalgia refers to nostalgia for something the individual has actually experienced, a subset of which is “collective nostalgia,” which multiple individuals feel about a shared experience with a group. Personal nostalgia is most commonly triggered by negative affect (especially loneliness), sensory inputs (e.g. music), and social interaction with individuals with whom the individual shares nostalgically-intoned memories (Wildschut et al., 2006). While the most common trigger of nostalgia is a negative feeling and nostalgia itself can be a negative experience when it compares a good past with a worse present, the experience and functions of nostalgia can be quite positive. Personal and collective nostalgia improves social bonding, self-esteem and mental protection against personal attacks, and positive affect (Routledge et al., 2012; Wildschut et al., 2006). Furthermore, Routledge et al. (2012) found that thinking about a positive past experience can improve meaning-making about “life meaning” and absurdist art. These findings are particularly well aligned with the *H. narrans* propositions of heuristics, hot cognition, and narrative cognition: people rely on informational shortcuts, assign affect to new concepts based on previously known concepts (perhaps through referring to their own memories), and narrative “renders human existence meaningful” (McBeth et al. 2014, p. 233) (Table 4).

Table 4. Relating nostalgia to Homo narrans. In the second column I summarize how findings in the psychology relate to each proposition about the NPF model of the individual—e.g. how findings on nostalgia are similar to the proposition, or how the proposition suggests nostalgia might function in a policy narrative. Propositions from McBeth, Jones, & Shanahan (2014), and findings on nostalgia drawn from multiple sources (e.g. Baldwin et al., 2017; Cheung et al., 2017; Wildschut et al., 2014)

NPF PROPOSITION	RELATIONSHIP WITH NOSTALGIA
Boundedly rational	
Heuristics	One function of nostalgia is to learn from the past—it is a heuristic tool
Primacy of affect	<p>Nostalgia is a particular emotion (affect) that is likely a common lens through which individuals understand policies about change or about rural places and occupations.</p> <p>Nostalgia can be positive or negative in the present time, but is characterized by mixed emotions (typically negative affect toward current conditions, positive toward past)</p>
Two kinds of cognition	
Hot cognition	Social and political concepts are affect laden, new concepts assigned affect based on known concepts. Looking to the past and comparing with newer experiences can be a nostalgic process—yearning for the past or finding ways to learn from the past
Confirmation and disconfirmation bias	Nostalgia enables and heightens defense of concepts of the self or one's in-group—i.e. used to counterargue evidence incongruent with priors about the self and one's group being “good”
Selective exposure	Nostalgia shows memory itself is selective—typically nostalgic memories downplay negative aspects while exaggerating positive ones.
Identity-protective cognition	One function of nostalgia is to protect identity and to strengthen ingroup bonds and collective action capacity.
Primacy of groups and networks	
Narrative cognition	One function of nostalgia is to improve meaning-making ability.

“Collective nostalgia” has also been used to describe nostalgia for experiences, events, or general past conditions specific to a group, but not necessarily experienced by the individual experiencing the nostalgia. This type of nostalgia is more accurately called historical or national nostalgia (Batcho, 1998; Routledge et al., 2012; Stern, 1992). Findings on collective nostalgia, both personal and historical, suggest that groups with shared nostalgic experiences or views are better positioned to address collective action problems (Baldwin et al., 2017; Cheung, Sedikides, Wildschut, Tausch, & Ayanian, 2017; Wildschut, Bruder, Robertson, van Tilburg, & Sedikides, 2014; Wildschut et al., 2006). Both personal and historical nostalgia can also serve as a tool for

learning (Baldwin et al., 2017; Bradbury, 2012). In contrast with these potential benefits, Cheung et al. (2017) found that nostalgia contributes to heightened negative affect toward outsiders, and Baldwin et al. (2017) found it contributes to “evasion” of collective guilt that acknowledges past wrongdoings of the group (e.g. U.S. displacement of first nations peoples). This strengthening of in-group bonds and of negative attitudes toward outsiders, along with the protection of positive group image has interesting implications for NPF. The *H. narrans* proposition of “primacy of groups and networks” argues that “social, professional, familial, and cultural networks and groups [...] play a vital role in helping individuals assign affect to social and political concepts” (McBeth et al. 2014, p. 233). Nostalgia is triggered by social interaction, but also influences how in-group and outgroups are conceptualized. These findings on the social implications of nostalgia could also overlap with the construction of “characters” in policy narratives, and with strategies like angel shift (exaggeration of good qualities of the self or in-group) and devil shift (exaggeration of negative qualities of the “villain”).

Historical nostalgia has been less extensively researched than personal nostalgia, and much of the research has been conducted in the field of marketing and consumer behavior (Batcho, DaRin, Nave, & Yaworsky, 2008; Routledge et al., 2012; Stern, 1992). Historical nostalgia is sometimes defined as a more generalized longing for “the way things used to be” when one was young or before one was born. In contrast with personal and collective nostalgia’s association with social connectedness and collective action capacity, historical nostalgia has been found to be associated with cynicism and “less emphasis on relationships and the expectations and norms of others” (Batcho et al., 2008). Stern (1992) provides a good starting point in her analysis of historical nostalgia in advertising, which she approaches through a literary analysis lens (Table 5). While many interviewees in this research might have personal nostalgia about their rural community and commercial fishing, some who were not born in the area my experience historical nostalgia that influences their understanding of commercial fishing and community identity.

The question of what role nostalgia and temporal setting play in policy narratives has yet to be determined. The influence of nostalgically-charged communication depends in part on how transportive the narrative is. “Transportive” refers to the extent to which a reader feels absorbed in, or a part of, the world in which the narrative takes place. Green and Brock (2000) describe it as “an integrative melding of attention, imagery and feelings [...] where all mental systems and

capacities become focused on events occurring in the narrative” (p. 701). Similarly, Han and Fink (2012) highlight the importance of “vividness” in the persuasiveness of narrative forms of evidence, in contrast with the magnifying effects of quantity on statistical evidence. They argue Green and Brock’s (2012) “transportiveness” is actually because of vivid language, rather than the evidence being anecdotal or narrative instead of statistical. In either case, the degree to which the reader is absorbed in the narrative changes the effect of the narrative. In a study on historical nostalgia in advertising, Stern (1992) explains, “if vicarious participation in a historical era can be evoked, the imaginative adventure may create positive beliefs about the current personal relevance” of the subject (p. 16).

Table 5. Hypothesized manifestation of narrative elements influenced by personal and historic nostalgia. From Stern’s (1992) analysis of historical nostalgia in advertising. Historical is a broad longing for “the way things used to be” before one was born or when one was younger regardless of whether it relates to a direct or specific experience.

LITERARY ANTECEDENT	Historical romance	Sentimental novel
SETTING	exotic long ago far away	familiar home and hearth
PLOT	quest linear goal-oriented	birth/rebirth cyclical return to womb
ACTION	adventure fantasy “fairyland” wonders	realistic story lifelike incidents
CHARACTERS	idealized aspirational role-models	real-life recognizable ordinary people
VALUES	heroic ones courage, honor mercy	“everyman” ones love, security nurturance
TONE	melodramatic exaggerated	sentimental tearful
PERCEIVER’S MENTAL PROCESS	imagination	memory
PERCEIVER’S RESPONSE	empathy bonding with an “other”	identification development of self-image

Personal nostalgia can play a role in insider rural identity in the face of rapid change. As Fitchen (1991) describes, “a strong and positive identity can be a crucial ingredient in community survival. Nostalgia, however will not suffice, and some of the attributes that traditionally anchored the identity of a community may have to be altered to reflect recent change and modern realities” (p. 163). Osbaldiston (2017) also notes that outsiders are involved in “increasing contestation of spatial practices where authentic practices in particular are lauded, while those that are seen as failing to adhere to the rural idyll are shunned. This suggests that if policymakers adhere to a historical nostalgia narrative of rural places, policies that benefit rural communities but do not adhere to the rural idyll may face greater barriers than those that preserve rural idyllic appearances. Alternatively, nostalgically intoned characteristics or assets of rural communities may be seen as lost causes, or decline itself as a characteristic of rurality that is unconsciously protected in policy. Commercial fishing may be particularly vulnerable to macro-level narrative influences in decision-making fora on the state and national level because of the narrow population with direct experience in the industry and limited geographical range. For instance, if stories of decline following quota system implementation are aligned with existing images of decline in rural communities, and does not seem worse than existing assumptions of decline, the motivation for policy change is likely diminished. I use findings on the definitions, manifestation, and functions of nostalgia to guide my analysis of qualitative interview data. This approach is refined through linking nostalgia with NPF. The two lenses are highly compatible in part because NPF can include codes for “plots” of decline and for “settings” including time and rural place.

Research Questions

Previous research on Graying has focused on drivers (e.g. increased barriers to entry) and impacts (e.g. inequitable access to commercial fishing) of the phenomenon, and little has been done to explore how coastal communities construct meaning around Graying. The two research questions guiding this analysis address the role of rurality and nostalgia in narratives about Graying in order to fill this gap in the literature. Answering these questions provides insights on the sociopolitical dimension of fisheries management—valuable information for satisfying the call for understanding the economic, community-wide impacts of commercial fishing management and policy in National Standard 8. This research is aligned with Ecosystem Based Management (EBM), and could contribute to future EBM of fisheries experiencing Graying or similar problems by informing solutions to, and communication about, social and economic impacts.

In this research I assume Graying of the fleet is the policy problem in the narrative. I use other coding distinctions in order to answer whether Graying is, in fact, the policy problem of interest and whether there are other overshadowing policy problems. Answering these questions contributes to the development of the Narrative Policy Framework, but can also provide practical insights into challenges to communicating about graying of the fleet or other coastal, rural policy problems. I focus on narratives among “community of place” members, not “community of interest,” but this distinction is blurry and allows for examination of variation in narratives between community leaders with differing degrees of experience in the community of place and the commercial fishing industry.

1. How do nostalgia and concepts of rurality influence the framing of major narrative elements (especially the problem, setting, and solutions) in these narratives?
2. How, if at all, do narratives among relative “insiders” to these rural port communities differ from those among relative newcomers or individuals without commercial fishing experience?

Methods

I use a mix of narrative, phenomenological, and grounded theory approaches to analyze the framing, collective experiences, and theoretical implications of graying of the fleet on the Northern Oregon Coast (Creswell & Poth, 2017). Data were obtained through mixed oral history (typically a narrative research approach) and semi-structured interview methods. The foci of analysis are 1) the community's shared or collective experience of the graying of the fleet phenomenon, and 2) how analyzing certain elements of their narratives through the lenses of NPF, rurality and nostalgia can contribute to further development of the NPF. While interview data in other Oregon port communities are available, I limit my analysis to two geographical locations on the Northern Oregon coast in order to test the application of NPF, as informed by the lenses of rurality and nostalgia, to graying of the fleet.

A. Research Sites

I collected interview data from two Northern Oregon major commercial fishing port communities and the surrounding area: Astoria/Warrenton, and Garibaldi/Tillamook.

1. Astoria/Warrenton—Clatsop County, Oregon

Astoria and Warrenton are two cities at the mouth of the Columbia River in the Northwestern corner of Oregon. The commercial fishing industry in the area involves such significant flows and overlaps of livelihoods and economies between the two, they are often discussed as one site in marine resource management discourse. There may still, however, be distinct communities of place when discussing community leadership, policy and politics.

Astoria is a small city of approximately 9,595 people. There is a nearly even 50:50 proportion of men:women, and 24% of the population is over the age of 61. Warrenton has a population of 5,260, with 51% of the population identifying as male and 16.3% of the population over the age of 61 (U.S. Census Bureau, 2016). The Astoria-Warrenton port is one of the most productive in Oregon. In 2016 it accounted for 32% of the ex-vessel value of fish in the state (The Research Group, LLC, 2017)

Astoria hosts an annual festival celebrating commercial fishing called the FisherPoets Gathering in which commercial fishermen are encouraged to share their poetry, music, and other creative expressions. FisherPoets started in 1997 as a small gathering of people working in the commercial fishing industry, and has continued to gain broader public attendance and media

attention. It has even been featured in national and international media, including the New York Times, Smithsonian magazine, and BBC (Broderick, n.d.).

2. Garibaldi/Tillamook—Tillamook County, Oregon

Garibaldi is a small town in Tillamook County with a population of approximately 779. As is typical of natural resource dependent communities because of the historically gendered work, slightly over half of the population is male. 37% of the population is over the age of 62. The population of Garibaldi has fluctuated in the past several years, but has had a net loss of 99 people since 2010 (U.S. Census Bureau, 2016). Garibaldi is a small port, accounting for less than 2% of the ex-vessel value in Oregon on 2016 (The Research Group, LLC, 2017).

Garibaldi is a smaller port, but is the closest coastal city to much of the Portland Metro Area. In reports on port productivity it is typically grouped with Tillamook, Pacific City, Nehalem and Netarts, which together accounted for only 2% of Oregon's commercial fishing value in 2016 (The Research Group, LLC, 2017). Tillamook County is known more for its dairy production than its fishing. The Tillamook Creamery Cheese Factory is among the most visited tourist attractions in Oregon, with approximately 1.3 million visitors per year (Tillamook County Creamery Association, n.d.).

B. Data Collection

In this research I collected a subsample of Oregon fisheries stakeholders. I focused on community leaders in Astoria/Warrenton and Garibaldi/Tillamook, whose roles and political influence vary, as a “constellation of actors” (Shanahan, Jones, McBeth, et al., 2018). Some interviewees have the potential to directly influence policy decisions on the local level, and some are less directly involved in policy-making institutions but are influential in service, non-governmental organizations, and local businesses (e.g. teachers at public schools and colleges, food bank organizers, cannery business owner). Potential interviewees were identified using a modified snowball sample (Creswell & Poth, 2017) that began with an Internet search for local government officials and leaders of community organizations. Two key informants in the Astoria-Warrenton area advised on which individuals would be most knowledgeable about the community, and suggested other individuals whom they knew as knowledgeable and active members of the local community. These informants did not know the community in Garibaldi/Tillamook as well, but one recommended contact and an online search was sufficient to initiate a snowball that approached saturation (Creswell & Poth, 2017).

I contacted 38 individuals, and was able to interview 23. Of the 23 interviewees, 8 were based in Astoria, 3 in Warrenton, 7 in Garibaldi, and 4 in Tillamook. Nine interviewees were born and raised in the local area, and 13 moved to the area in adulthood. Table 6 provides an overview of interviewee characteristics. Interviews were conducted in the coastal towns in which the interviewee was based, typically in the interviewee's office or a nearby public location like a café. Each interview began with a broad, oral history-oriented question about the interviewee's experience living in a coastal community, followed by 5 main interview questions, and a total of approximately 12 follow-up questions (Appendix A). Interviews were 25-90 minutes long, and all but one of the interviews conducted in person were video recorded. Two interviews were conducted over the phone.

Table 6. Number of interviewees in categories based on location, newcomer status, and experience in the fishing industry or ancillary industries (e.g. canning)

Location

Astoria/Warrenton	12
Garibaldi	11

Newcomer status

Native-Born	10
Newcomer	13

Experience in fishing or ancillary

Fishing Experience	10
No Fishing Experience	13
Ancillary Experience	11
No Ancillary Experience	12

C. Data Analysis

While most NPF studies to date use a quantitative approach, I use qualitative analytical methods. Qualitative NPF is appropriate for this project because of the small sample size, and because I seek to further develop certain theoretical aspects of NPF through applying the lenses of rural sociology and nostalgia (Gray & Jones, 2016). I use the construction of rurality as a macro-level narrative, which is tied to meso- and micro-level policy narratives in part through nostalgia. Nostalgia is a theme and tone in macro-level perceptions of what is considered rural, especially

among tourists, second home owners, retirees, and other rural outsiders or newcomers. Nostalgia is also, however, an emotion and cognitive process through which individuals process information and guide their behavior towards their ingroup or the outgroup. Data were coded using MaxQDA software, with an iterative, inductive-deductive approach to creating codes. In doing this, I used some codes from theory, those from NPF narrative elements, and developed some codes inductively as they emerged from the data (Appendix C) (Creswell & Poth, 2017). Intercoder reliability was tested with one expert on rural sociology for major codes except NPF-related codes. We achieved approximately 90% intercoder reliability for those codes, without need for further refinement. NPF code definitions and examples were reviewed and approved by NPF theorist Michael D. Jones.

The first question, “How do nostalgia and concepts of rurality influence framing of major narrative elements (especially problem, setting, solutions) in these narratives?” is operationalized through code co-occurrence between NPF narrative elements, the additional “nostalgia” code, and rurality codes (Table 7). Code co-occurrence is simply the occurrence of two codes on the same coded segment. For instance, “it’s easier for a young guy to get in on a small boat than it is on a big boat, generally. They’re cheaper, more economical to get into.” (native-born Garibaldian) is coded “operation size,” “cost,” and “problem.” “Problem” is defined as Graying of the Fleet as a policy problem, so it was applied to all segments in which Graying was specifically discussed. Many segments discussed other policy problems, which were coded as “contextual problems.” Co-occurring codes are conceptually connected to the interviewees, so they can be used to better understand how the interviewee constructs meaning around particular topics. MaxQDA “maxmaps” are concept maps similar to network analysis in which connections between codes are visualized, with the thickness of lines connecting codes indicating the frequency of co-occurrence.

All codes were considered to answer the second question, “How, if at all, do narratives among relative ‘insiders’ to the rural and commercial fishing communities differ from those among relative newcomers or individuals without commercial fishing experience?” All interviewees either volunteered information about whether they were born on the coast, or were asked as a follow up question to the first oral history question. Using MaxQDA, I compare how similar or different the presence and frequency of codes are between interviews. I then focus specifically on similarity or difference in the use of concepts labeled with NPF or rurality codes

(Table 7, 8). Code frequency and presence/absence per document provides an overview of what concepts occurred in interviews, what concepts were important themes, and whether they occurred consistently across interviewees. Co-occurrence with other codes is necessary to understand the meaning attributed to codes.

Most codes can be categorized by the three theoretical lenses described above: NPF, rurality, and nostalgia. For the NPF, one narrative element I explore in depth is that of setting. According to Shanahan, Jones and McBeth (2017), “the purpose of a setting is to focus the audience attention to a particular space and time” (p. 4). Temporal setting has been neglected in NPF development and application, and is particularly significant to operationalizing nostalgia in analysis of interviews about graying of the fleet. I coded for temporal setting (past, present, future) as well as nostalgia itself. As I coded it became clear that problems besides Graying were emerging as significant to the sociopolitical setting. This is consistent with the holistic community resilience concept, and Clarke and Mayers (2017) findings on the relationship between commercial fishing, attachment to place, and resilience. I therefore added a “contextual problems” code. “Anecdote” is another code describing the setting in that they are a form of evidence, which McBeth, Jones, & Shanahan (2014) consider part of the setting of a policy narrative (Table 7).

Codes informed by rural sociology and rural studies theories include place attachment, rural, and tight-knit. The “local identity” code was only used for segments describing commercial fishing as important to local identity, otherwise sub-codes were used (Table 8). Codes that emerged and are significant to setting are categorized as “environment,” and include landscape, environmental conditions, and infrastructure (Table 9). Physical setting is the strongest link between NPF and the lens of rurality, but rurality also includes other forms of “local identity.” Codes informed by the literature on rurality include place attachment, tight-knit, and history. Codes that emerged in ways that were relevant to local identity construction include ethnicity, pride, volunteer, and struggle (Table 8).

Table 7. Codes borrowed from or informed by the Narrative Policy Framework. Most codes are borrowed from previous NPF research (e.g. Shanahan, Jones, & McBeth, 2018), with definitions modified to apply to Graying of the Fleet. Hypothetical (problem), contextual problems, nostalgia and hero-victim are novel codes informed by emergent themes and the lens of rurality. Segments were defined by major interview questions or clear shifts in the main focus of the interviewee's answer.

CATEG ORY	CODE	DEFINITION
setting	anecdote	Interviewee uses personal story or anecdote, or refers to a specific friend/relative, to answer an interview question or elaborate on a statement. Not used for first (oral history) question or similar personal questions because anecdote in that case not really spontaneous or meaningful outside their personal history.
	present	Anecdote set in the present, or emphasizes that something pertinent to Graying plot is happening currently.
	nostalgia	Nostalgia explicitly referenced, or comparison between current or future and past in which past is better in some way.
	future	Set in future, emphasizes future as the important thing to think about, forward-looking.
	past	Set in past, emphasizes past as the important thing to think about, backward-looking.
character s	blame the victim	Victim at fault for the problem or how the problem affects them.
	hero-victim	Victim seen as also having the ability to lead or contribute to a solution. Greater self-efficacy, empowerment than "blame the victim."
	villain	Individual or group portrayed as at fault and potentially malicious, selfish, or inconsiderate.
	victim	Individual or group portrayed as being hurt by graying of the fleet or another major problem that the interviewee sees as tied to graying of the fleet.
	hero	Individual or group portrayed as currently or having the potential to solve the problem.
problem		Graying as a problem.
	not graying	Interviewee says Graying is not the problem (but might be a symptom or fact of life), there are other problems to focus on.
	hypothetical	hypothetical problem--typically in response to interview question about tipping points or what would happen if there were a decline in family fishing operations in the area.

	contextual problems	"Big picture" problems, or problems that overshadow Graying in the conversation (e.g. general local economy, general problems with practical education).
	solution	A way of solving the problem or ameliorating negative effects identified. Includes "invisible hand" economics type solutions.
	no solution/unknown	Say there is no solution, solution is unattainable, or do not know of a solution (NOT including "invisible hand" economics type "solutions").
		Resilience or adapting to changes.
plot	neutral	Change acknowledged, but framed as neutral.
	outcomes/impacts	Outcomes, impacts or significance of the problem.
	cause	Cause of the problem (Graying or contextual) identified.
	no change	Situation relating to the problem (plot) has not changed.
	cycle	Situation relating to the problem has changed, but does so continually and in a cyclical manner that might mean no net change.
	imprvt	Improvement, plot of upward change.
	decline	Plot of decline, worsening situation.

Table 8. Codes informed by rurality. "Local identity" is the overarching category, but when used as a code refers only to when commercial fishing is identified as an important part of the local identity. Otherwise other codes were used to specify how local identity and rurality emerged in the segment. Segments were defined by major interview questions or clear shifts in the main focus of the interviewee's answer.

CODE	DEFINITION
local identity	commercial fishing is important to the local identity or character of the community. Typically use the "daughter codes" when not necessarily commercial fishing, but something about (e.g.) being rural.
struggle	struggle and sacrifice of individuals in the fishing industry, including (e.g.) danger of the work and financial difficulties
crime	crime or other "dark" or negative aspects of the community, especially if attributed to the rurality of the area. some rural sociological avenues of research have been critiqued for being too aligned with the romanticization of rural places and communities.
place attachment	expression of attachment to the place itself, usually in conjunction with "unique" and/or "landscape." Currently also includes attachment to fishing or an aspect of commercial fishing, but might need to split considering livelihoods and attachment to place seem to be two different veins in the literature
livelihood attachment	attachment to fishing, because they love it, their calling

ethnicity	ethnicity, ethnic heritage, country/region of origin
tight-knit	community described as tight-knit or trusting. In some cases, this can mean resistance or negative behavior toward outsiders, but so far this code can also be used to mean "welcoming" (yet difficult to really become "part of that crowd"), except for one example of racism
rural	explicitly references rurality of locale or to the small population, isolation
pride	pride in the community or prominent aspects of the community (including commercial fishing)
history	history of the area or industry, tradition
volunteer	strong volunteer ethic, or donation to community activities and causes
out-migration	out-migration from local community
in-migration	in-migration including tourism, 2nd homes and retirees

Table 9. Codes relating to the physical setting and environment but not nested within rurality. Segments were defined by major interview questions or clear shifts in the main focus of the interviewee's answer.

CODE	DEFINITION
infrastructure	physical infrastructure of the area or port, including transportation routes to I-5 as well as port infrastructure
sustainability	stewardship, sustainability itself, and protecting resources for the future
env-condn	environmental conditions like ocean temperatures, storms, pollution, etc.
landscape	physical landscape features that are not infrastructure, includes climate/weather, aesthetics, location relative to other landscape features or ports

Results

A. Overview of the Narrative

Graying of the fleet is neither a non-narrative nor a policy narrative per se. Many participants either did not know much about Graying, its causes and impacts, or did not see it as the main problem. The policy narrative that is most salient to the rural coastal community leaders in this research is that of the increasing difficulty of making a living in commercial fishing, primarily because of regulations that increase prices or constrict opportunities to fish. In this narrative, Graying is just one of many symptoms of the policy problem, the increasing difficulty of commercial fishing from increased costs and restrictions. While coding Graying as the “problem” and other problems as “contextual” seems to imply the other problems are not as pertinent to the policy narrative, it is actually the other way around. As Cramer, et al. (2018) suggest, the salience of broader social shifts “could be one reason why the graying of the fleet did not emerge as a concern among a majority of individuals representing the [Community of Place]” in Newport and Port Orford, Oregon. Unlike Cramer et al.’s (2018) findings, Graying was acknowledged as a problem among interviewees in this research (all of whom are part of the “community of place”), and those who didn’t see Graying as a problem had direct experience with commercial fishing. NPF-oriented questions about cause, solutions and heroes were often asked after questions that primed participants to think about contextual problems (e.g. “what would happen if all or most of the family fishing businesses in the area were sold?”). This limits the ability to apply these codes to Graying itself, but their application to “contextual problems” is consistent with participants’ construction of Graying as an aspect of a broader policy narrative.

Qualitative analysis suggests several potential reasons why Graying is not seen as the main policy problem:

- In Garibaldi and Warrenton, several participants use anecdotal evidence (in one case confirmed with marina slip records) to show Graying is not happening in a significant way in their local community, although they recognize it is occurring elsewhere or in the fishing industry overall.
- Graying is seen in the context of broader rural and generational trends, especially the out-migration of rural youth, younger generations’ aversion to physical work (leading to victim-blaming in the narrative), and a lack of vocational and practical skills training in high schools combined with increasing pressure to pursue higher education.

- Two salient solutions to Graying are ones without agency: the invisible hand of economics that will fill the demand for labor as older generations retire, and the faith that there will always be someone who wants to fish so there will always be someone to replace the generation that retires in spite of a potential gap if young adults pursue other careers while there is limited opportunity for them in the fishing industry.

The relatively low salience of Graying compared with contextual problems is not to say, however, that Graying is not a problem or does not have important consequences. Many interviewees pointed to intergenerational or institutional knowledge as critical to the fishing industry and something that could be greatly diminished with Graying of the Fleet. Native-born rural residents, who appeared to be more aware or forthcoming in their discussion of outcomes and impacts overall, were also more aware of the multiple ways loss of institutional knowledge could impact fishermen and the community. For instance, despite his limited direct knowledge of the fishing industry, one interviewee was able to hypothesize that disruption to intergenerational knowledge and mentorship could impact the productivity of the fishing industry and the safety of new fishermen:

“It's kind of reasonable to just suggest that as fishermen with experience go away and new fishermen come in, if you don't have mentorship, if you don't have training, if you're not taking that knowledge and transferring it to a younger generation of fishermen, then you're sticking some very hard-working individuals with not a lot of experience on the middle of the ocean; that's not necessarily a good idea from a safety standpoint.”
(native-born Garibaldian)

This extrapolation was consistent with a similar, contextual concern about the increased cost of fishing generally, which could push new fishermen to buy older, smaller, or poor-quality vessels. A native-born Tillamook participant, said:

“The young people who are able to make it today, as I said earlier, you know, they have to inherit a fishing boat from their dad or from their parents. Or they just start really small. A small boat, a used boat, and that itself is dangerous because small boats don't do well in the ocean when conditions are rough. So you just don't find young people getting into the industry anymore.”

The most frequent codes include decline, anecdote, other trades, in-migration, economy, and rules (Fig. 1). The frequency and connections between these codes show a general plot of

decline, whether about Graying itself or the myriad contextual problems that often took center stage. Anecdotes were the most common form of evidence, and they occurred in all interviews in both the opening oral history question and in later questions. They were used to illustrate whether Graying was happening, what is causing it, and what the impacts might be. They were also used to illustrate contextual problems including regulations and migration. The connectedness of commercial fishing to the rest of the economy was emphasized, especially when interviewees were discussing potential impacts of Graying and other problems facing the commercial fishing industry. For example, one native-born Astoria/Warrenton resident said:

“[Commercial fishing is] still a significant factor. In a way that a lot of people don't realize, there's tremendous influx of new dollars into the state, not just Astoria but the state of Oregon. Every time someone goes to Alaska, they bring their paycheck back to Oregon, they're paying taxes, they're supporting the university systems, the schools, fire, police. It's a huge piece of the economy that isn't in sight. [...] We're trying to find sources of funding for training. People look at the number of jobs and say, well it isn't that significant. Then you start looking at the tens of millions of dollars that are being brought back into the economy”

A native-born Garibaldian with commercial fishing experience also discussed connections between commercial fishing and the rest of the local economy, but was optimistic because of the diversity of opportunities he perceived in the small town: “I think there are enough jobs around here that you won't notice that big of a hiccup” (native-born Garibaldian).

Because of the importance of commercial fishing to other sectors of the economy, including tourism, declines in commercial fishing were seen as having far-reaching impacts either currently or as a potentiality. Some declines were seasonal and mundane, such as one Garibaldi Newcomer's observation that “the town changes according to the seasons of the fishing, and you see the direct impact of a good year or a bad year in the community. And you see the impact of “how the market changes over time.” Others were more broadly concerning: “[If most of the family fishing businesses in the Tillamook area were sold, or out of business] it would have a negative impact on the communities, but it's happening now. The fishing industry is slowly ratcheting back, and they know that. The economic makeup of our coastal communities is slowly changing because of that” (native-born Tillamook resident). Commercial fishing is considered a critical part of the economy in both areas, especially in Tillamook where it is considered one “leg of the stool” (newcomer Tillamook resident) in the area's natural resource-based economy. A less profitable fishing industry or shrinking fleet would weaken one leg of the

stool, and could contribute to a decrease in economic activity. Finally, other trades, especially forestry and agriculture, were commonly brought up as part of the local culture and as industries facing similar challenges. For example, one newcomer Tillamook resident with expertise in the dairy industry compared fishing with dairy:

“We see that kind of change in a lot of industries. Fishing, I think, is one that is not something that—[for example] if you're into sales, you can jump into one kind of sales and easily jump into another type. I don't know that, between the family tradition, the amount of experience, and the investment it takes to get into fishing, that you could easily just say ‘Well, I think we'll run a car dealership next week.’ And we see that in a lot of natural resources. I mean, dairy's the same way. These are long-term investments. We don't just plant wheat next year because this year milk wasn't that good... And I think the same thing's true of fishing. We figure out how to make it better; and change is slower”

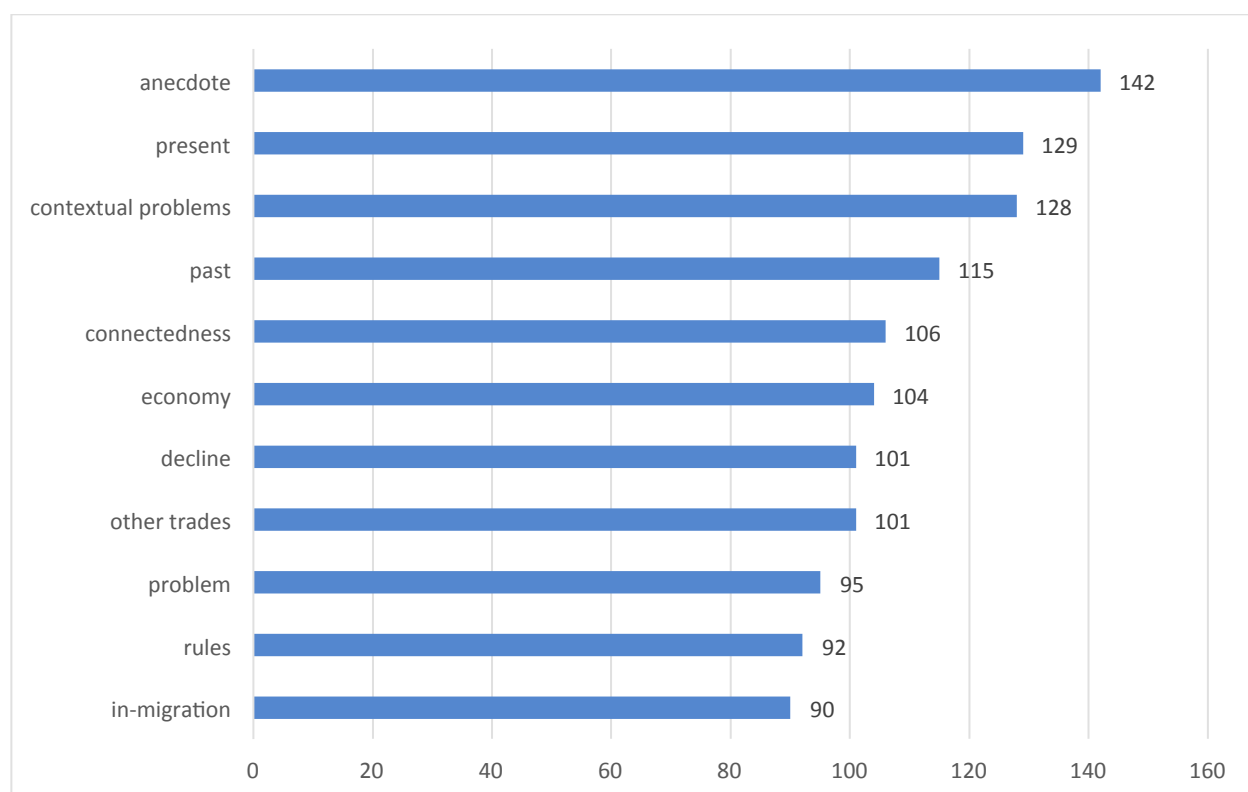


Figure 1. Most frequent codes. "Problem" refers specifically to Graying of the fleet. Data labels indicate the total number of occurrences across all interviews, allowing counts multiple times per interview.

B. Rurality, Nostalgia and Problems

The most common co-occurrences within the rural culture and processes theme were In-Migration + Other Trades, In-Migration + Local Identity, Other Trades + Common, and Local Identity + Economy (Fig. 2). The Local Identity Code was used only where the interviewee indicated that commercial fishing is very important to the local culture. The co-occurrence of these three codes (in-migration, local identity, other trades) is in part because many participants saw the local natural resource culture as a reason why tourists visit their community. As one newcomer Astoria/Warrenton participant explained, “There’s always talk about ‘Well, we want to keep Astoria unique [...]’ which then begs the question, ‘What is unique about Astoria?’ And part of it is that sort of rough blue-collar part of the community.” While the benefits of tourism to the community, and benefits of local natural resource culture to tourism, were generally recognized, in-migration was discussed with mixed emotions. Tourism involving second homeownership was often seen as a problem, and housing pressures were discussed in 15 segments, in 8 interviews. One quote from a native-born Astoria/Warrenton resident highlights this tension: “A working waterfront is important. It’s an important fabric to your tourism. And yeah, things evolve. Maybe we’d become some nice second homes for people. But... Is it gonna produce anything? Is it gonna have those middle-income jobs?” Just in this short quote, many layers of the commercial fishing culture and contextual concerns are evident: there is pride in producing important food commodities, and awareness that that production has multiplier effects in the community both through living wages and through attracting tourists; tourism’s increasing economic role and benefits in the community are recognized, but in-migration is also seen as a problem, especially when it involved second homeownership.

In addition to In-Migration + Local Identity, some common co-occurrences were Local Identity + Unique, History + Local Identity, and History + In-Migration (Fig. 2). It is notable that none of the interview questions requested information on local history or the role of history in local culture, although follow-up questions about the role of history in the community were asked if the topic arose. These major co-occurrences within the rurality theme highlight that interviewees consider the history of commercial fishing in the area to be significant to why and how commercial fishing is an important “thread weaving through the fabric” of the community

(newcomer Astoria/Warrenton resident). The commercial fishing industry and history are also what make the community unique. The role of the commercial fishing in the local culture is considered not only intrinsically valuable, but also valuable to other economic sectors, especially tourism. For instance, when asked who would be impacted if there was a decline in commercial fishing, one newcomer Astoria/Warrenton resident said:

“I think, first and foremost, the people who make their living in that industry and their families would certainly be the front line of the people taking the economic impact—and you take a look at that: if people aren’t able to find something new or they have to leave the area do find work somewhere, suddenly you have an area that could possibly see housing open up and that typically drop the value of peoples housing, you could see retail stores and businesses--whether that's dr.'s offices or dentists or supermarkets, they're gonna have less clientele, they're gonna have less customers if people either don't have any money or they leave. So I think you lose that, you lose a little bit the soul of the community too [...] in this area and probably in the united states would definitely hate to see our unique communities lose their soul, and suddenly we're a cookie cutter nation of every community has a gas station on this corner and everyone has a KFC on this corner, and I don't think any of us want that. I think we want unique communities, and I think when you lose industry you lose some of that.”

Commercial fishing is not the only tourist attraction, nor is it the only thing interacting with interviewees’ concepts of rurality. The local landscape (geographic/physical setting) is also seen as something unique and influential in tourism. In Garibaldi, the unique local landscape is seen as limiting tourism because it does not have beaches. Its location, however, being relatively close to major markets (i.e. Portland) is an advantage to the commercial fishing industry and potentially to tourism. One interviewee referenced this advantage when discussing the influence of Portland in previous and future change in the local fishing industry:

“You see the impact of how the market changes over time, and we have a really unique time, I think, with the greater emphasis on sustainability and access to the larger market in Portland. People who are interested in where their food comes from, how it’s harvested, and how that affects the people that are involved in that process. I think it has the potential to really impact a small community like Garibaldi. With people being very close, geographically close, to a huge market there, that can improve the bottom line of the fishermen here.”
(Newcomer Garibaldian)

In Astoria/Warrenton, the diverse landscape is relevant to the contextual problem of out-migration in addition to the in-migration. It is seen as contributing to return migration of youth who go away to college or other careers then return:

“I think they go live in the city for a few years and it's really exciting to have so many concerts to choose from and nightclubs and all. But you're also living in a city, looking at the building next to you through your window. And you know some people love that, but other people realize, you know, that town I grew up in was really beautiful and this town isn't. And so, they try to come back here just because, I mean, from here I can drive 16-17 minutes and be on the beach, at the ocean. Where else can you do that? And it's only a 2-hour drive to Portland, where you can do pretty much anything, or a 3-hour drive to Seattle. So it's pretty much just a great location.”
(newcomer Astoria/Warrenton resident)

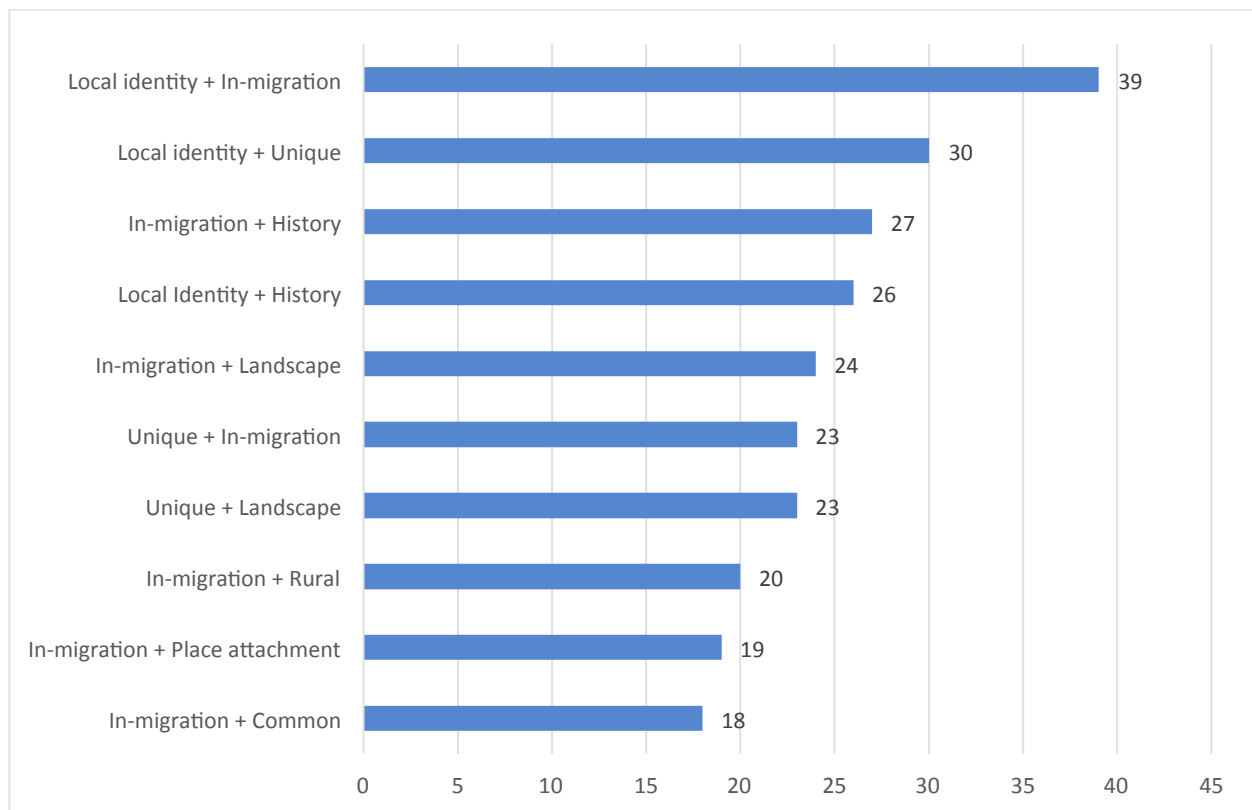


Figure 2. Most common co-occurrences within the rural setting category. “Local Identity” refers specifically to segments in which the importance of commercial fishing to the local culture or identity was mentioned.

C. Rurality, Nostalgia and Characters

Two novel characters emerged from these interviews that are likely important to further NPF studies of rural issues and resilience: hero-villains and hero-victims. The concept of responsibility forms the foundation for both. The most common villain in this narrative was policy makers. In Astoria/Warrenton, especially, interviewees sometimes specified the villain as

Governor John Kitzhaber, who instituted the gillnetting restrictions on the Columbia Mainstem, and Governor Kate Brown who continues to support those restrictions. More commonly, however, interviewees referred broadly to governmental processes and institutions that, whether ignorantly or intentionally, instituted regulations with negative side effects and did little to mitigate those effects. For example, one native-born Astoria/Warrenton resident connected regulatory issues in commercial fishing to a political problem more generally: “I think that's also a continuing wedge between policy makers and folks who are actually, you know, being affected by that.” This villain was made more complex, however, by the frequency with which interviewees also suggested that policy makers would or should be the ones to solve the problem.

Victim characters were also made more complex by their dual role as heroes. One native-born Garibaldian illustrates both characters:

“The fishing industry is responsible for their fate and their future. And if they cannot [...] find a way to come together and form a united front, so to speak, to protect their interests, they're going to get picked over [...] The appointed responsibility falls to politicians [...] They have to coordinate this”

While other heroes like local economic development organizations and community colleges, Sea Grant, and other support organizations were also common, the need and ability of the local community as a whole, and the commercial fishing industry or fishermen, was a significant trend that is likely related to the importance of anecdotes, and to rural setting, and the construction of natural resource industries. Narratives involving hero-victims were supported by anecdotes of current or previous solutions and adaptations among commercial fishermen or the community as a whole, and knowledge of historical resilience or adaptation. For example, MS and KP draw optimism from Garibaldi's past:

“Garibaldi has had to reinvent itself in the face of adversity. I'm sure it can do the same.” (newcomer Garibaldian)

“You know, the coast used to be full of these small fishing villages, but with the decline in salmon, or the decline in shrimp, a lot of these communities didn't survive. Garibaldi had the resiliency to kind of survive. They had some downtime, they had some hard times. But with recent economic development trends, and this trend in people wanting to source their food, [Garibaldi] kind of found a new life.” (another newcomer Garibaldian)

A newcomer Astoria/Warrenton resident who had lived in the area for many years mentioned resilience as a characteristic of the community, in part from the Scandinavian heritage of the community:

“We have a resilient group of people that, if one thing doesn't work, they'll try something else. So right now we seem to have a lot of breweries [laughs]... The backbone of this community is the Scandinavian heritage. They're hard working people, they're used to being out in the elements, it doesn't bother them if it's raining, or in this case, snowing.” (newcomer Astoria/Warrenton resident)

The rural West is constructed on a macro-level within and without rural communities as highly independent and hard-working. As the prevalence of the “struggle” code and its co-occurrence with commercial fishing’s role in the local culture suggests, this narrative is clearly applicable to the commercial fishing communities in this study. Some romanticization of the rural Western work ethic was evident, especially among newcomers in reference to the “Spartan work ethic” (newcomer Astoria/Warrenton resident) and “grit” (another newcomer Astoria/Warrenton resident) of the local people or culture.

D. Rurality, Nostalgia, and Temporal Setting

When narrowing the focus to only the rurality and NPF categories, the most common co-occurrences include local identity and past (39 total co-occurrences), other trades and past (37 co-occurrences), and other trades and present (36). These co-occurrences appeared in 20, 16, and 18 interviews, respectively, out of 23 interviews total (Fig. 3). The prominence of co-occurrences between natural resource industries and the past, particularly for the importance of commercial fishing to local culture (“local identity”), demonstrates the relevance of temporal setting and nostalgia to understanding narratives about natural resource industries and related rural issues. It is interesting to note that while other trades (typically forestry and agriculture) was discussed in segments set at least partially in the present almost as often as in segments set in the past, the importance of commercial fishing to local culture was discussed in less than half as many segments in the present (21 segments) as in the past (39 segments). “Problem,” referring to Graying of the Fleet, occurs nearly twice as often with present (42 segments) as with past (24). It occurred equally with nostalgia (9) and future (8). Contextual problems similarly occurred 65 times with present and 44 with past, but more often with nostalgia (20) than future (15). The analytical methods for temporal setting favored coding anecdotes and references to history,

which could overestimate the use of “past” compared with “present.” Comparing the difference in past and present for local identity with that of other trades, however, is illuminating and suggests that the construction of commercial fishing culture and the problem of Graying may be more influenced by or evocative of the past than are other natural resource industries or trades.

As psychological theories on the functions of nostalgia would suggest (Baldwin et al., 2017; Bradbury, 2012; Wildschut et al., 2006) discussing the past can be a productive, learning process rather than simply being backward-focused reminiscing. Baldwin (2012) defines “reflective nostalgia” as a “critical attempt to forge a relationship between individual and collective memory through understanding how the present can be improved by knowledge of the past” (p. 444). Of the 14 interviews (25 segments) that involved the future, 7 of them contained segments in which the past and future were discussed together, 12 discussed past and solutions together, and 13 discussed past and optimism together. For instance, one community leader referred to the past as context for making decisions about current land use:

“You look out there, look at all the pilings that way and that way, you see these thousands of pilings. It's because there used to be canneries there. You know the whole waterfront used to be covered with working stuff. It was net sheds, and canneries, and stevedore shops, and fish processing plants, and piers where the fishing boats would come in and unload their catch. So, it's interesting now, some of these long stretches of river that are completely empty, they're just viewsheds. People now say ‘Well, we don't want to ruin our beautiful views.’ Well, you know, you have more views now than you had a hundred years ago because a hundred years ago the waterfront was covered with work. And now a lot of that work is gone.” (newcomer Astoria/Warrenton resident)

Nostalgia’s function as a psychological tool for learning and coping could explain these seemingly contradictory co-occurrences. Similarly, nostalgia’s function in promoting bonding (in-group) social capital could be one of the underlying processes in the greater co-occurrence between local identity and past, compared with local identity and present, although the relatively high co-occurrence of other trades and present is not consistent with that pattern. An example of the relationship between history and local identity or culture is the Astoria regatta festival, which a native-born Astoria/Warrenton resident describes:

“We’re a volunteer community also—like I’m involved in our seaside rotary club, and I was president of our Astoria regatta festival 2 years ago. And the Astoria regatta festival [... is] an Oregon cultural heritage festival, meaning it's one of the oldest festivals in the state of Oregon. In fact, the regatta is the oldest. I think

the regatta and the Pendleton roundup are the 2 oldest. This festival started back in the late 1800s to honor the return of the fishing fleet to Astoria.”

Focusing on a particular problem, rather than local culture, seems to bring the setting back to the present. When asked about Graying, some interviewees responded with anecdotes like:

“There are also young people who are trying to get their start in fisheries and I know that the older generation is trying to do everything it can to help the young generation along. Most of the fisheries [are] very expensive to get into. But I do know there are younger people that are doing their best to do that.” (newcomer Astoria/Warrenton resident)

These results should be tested further: It could be that our project description (oral history methods) and questions primed interviewees to think about local history or their past experiences relating to commercial fishing.

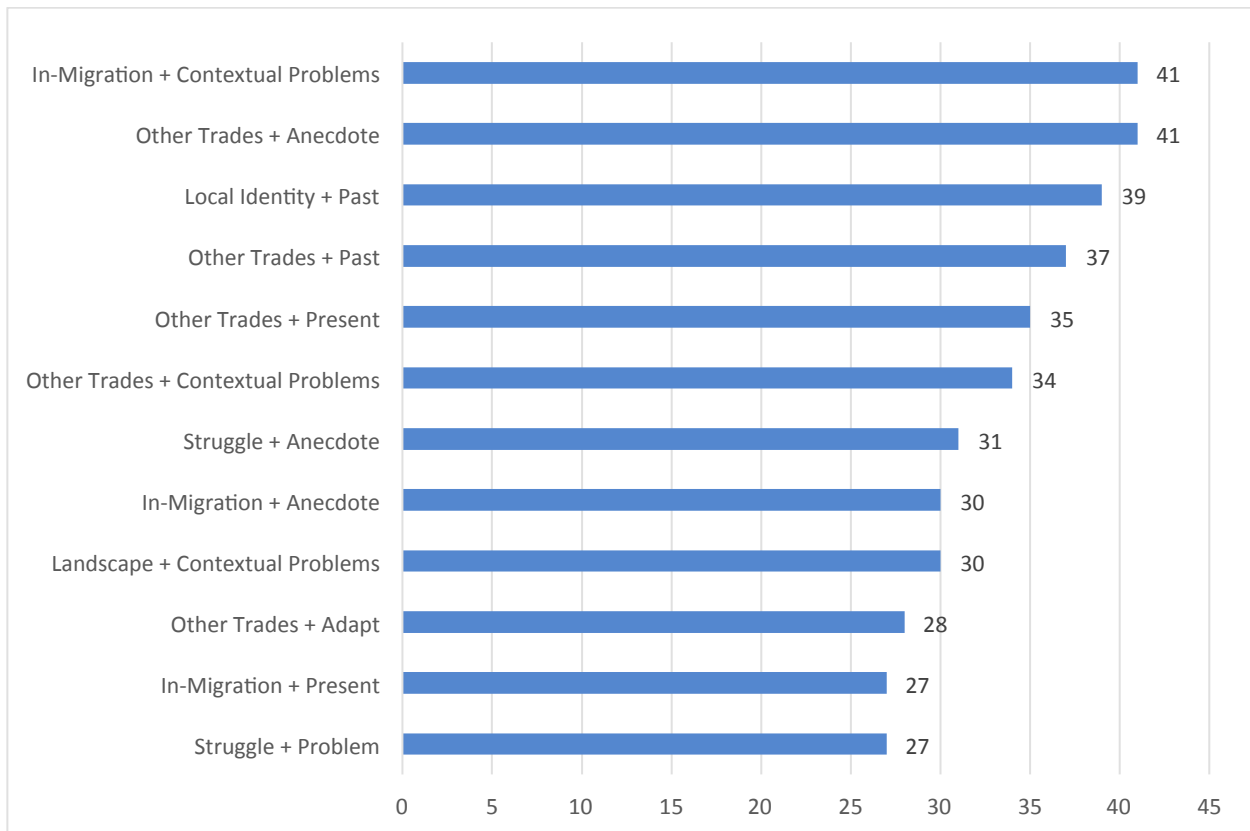


Figure 3. Most common co-occurrences between rurality and NPF codes. “Local Identity” refers specifically to segments in which the importance of commercial fishing to local culture or identity is emphasized, and “Problem” refers specifically to Graying of the Fleet as a policy problem. “Struggle” comprises a few concepts relating to the difficulty of commercial fishing, including physical difficulty, danger, and “feast-or-famine” cycles.

E. Differences between Native-Born and Newcomer Narratives

Rural setting

The macro-narrative of rural grit received more attention among newcomer participants than native-born ones. Newcomer participants were more consistent in their association between the challenges, hard work and dangers (as operationalized by the “struggle” code) facing commercial fishermen and local identity, livelihood attachment, and intergenerational fishing business practices (Table 10). While all 10 native-born participants referenced struggles at least once per interview, as compared with 12 of 13 newcomers, native-born participants did not consistently, across individual participants, discuss it with any particular code besides anecdote and decline (8 of 10 native-born interviews). For newcomers, however, co-occurrences of struggle + intergenerational, past, and problem were among the most common co-occurrences (each co-occurrence appeared in 11 of 13 newcomer interviews). This means there was more agreement among newcomers about how such struggles related to Graying itself. The “struggle” concept was also associated with intergenerational business practices for 9 of 13 newcomer interviews, reflecting a tendency for many interviewees to attribute the attachment some fishermen feel for their livelihood to their enjoyment and pride in physically difficult, even dangerous work. Newcomers were also more likely than native-born participants to consider such struggles as a cause of Graying or contextual problems because of younger generations’ aversion to physical work (10 of 13, and 5 of 10, respectively). For instance, when asked about what might be causing Graying, one interviewee said “I think it’s the hard work and that they can do other things and make just as much money without having the uncertainty of fishing. The rules keep getting more strict, I think, regarding fishing” (newcomer Astoria/Warrenton resident). While rules are one of the main causes described in this quote, the general difficulty of commercial fishing also plays a role.

Similarly, distinctively rural characteristics (e.g. small, isolated) were more common for newcomer (12/13) than native-born (7/10) interviewees, and there was more consistency in the co-occurrence of “rural” with other codes (Table 11). The greatest differences in co-occurrence were rural + local identity (9/13 newcomers, 2/10 native-born), and rural + other trades (11/13 newcomers, 3/10 native-born), reflecting a stronger tendency for newcomers to construct the local place and culture (i.e. physical and social setting) as specifically rural. One interviewee

specifically identifies the community as rural and connects rurality with natural resources, work ethic, and pride in the local community:

“The folks who have made their living and continue to make their living in the natural resources area, whether that's logging or fishing I mean, they're tough. They're tough people, they're hard working people. They certainly have jargon and lingo that a flatlander from [another state], you know, I had to really get used to. But I think they're tough people, they're proud people. They're proud of what they do, of what their family has done. I think, in a lot of ways, they're very proud of the history of a rural coastal community that, at one time, probably took a lot more grit than it does now.” (newcomer Astoria/Warrenton resident)

The only co-occurrence of “rural” that was slightly more common for native-born residents than newcomers, as a proportion of interviewees, was with “common” (5/10 native-born, 5/13 newcomer). This reflects how half or more interviewees expanded the scope of Graying and related commercial fishing issues to include causes, impacts, and victims that apply across rural communities. For instance, one Astoria/Warrenton resident with fishing experience lamented the political and economic disadvantages of rural communities: “A lot of these rural communities, sometimes, they get left out. And should be embracing these people for wanting to have another job, work overtime, do the hard work it takes to get ahead. And that needs to be recognized. We need these opportunities. Full time, part time, seasonal, whatever. It's very important.”

Attachment to place was greater for newcomers than native-born participants while attachment to livelihood was greater for native-born participants. This result is similar to findings in rural sociological literature documenting differences in environmentalist attitudes between newcomers or tourists and native-born rural residents or people working in natural resource industries (Robbins et al., 2009). The co-occurrence of attachment to place with local identity and in-migration differed most. Attachment to place and local identity seemed to have a feedback-type relationship, where the role of commercial fishing in the local culture is a reason residents were attached to the place, and attachment to both place and livelihood were reasons why commercial fishing is and will continue to be important to the local community.

“It's admirable that such a small community like Garibaldi, [...] that there would be so much effort [fishermen] would put towards maintaining their lives, their culture. And what they've chosen to do, and not to just roll over and hand the pink slip in on their boat [...] Most of those folks wanted to stay here, so they wanted to figure out a way they could stay here” (newcomer Garibaldian)

Table 10. Frequencies and co-occurrences of the "struggle" code by newcomer and native born. # Newcomer and # Native-born columns contain the number of individuals in that group in which the code or co-occurrences appears.

Struggle (total 68 occurrences)	# Newcomer (n=13)	Total CO Newcomer	# Native-Born (n=10)	Total CO NB
frequency	12	47	10	21
intergenerational	11	16	5	6
past	11	17	6	9
nostalgia	4	6	6	7
present	8	18	7	8
future	1	1	0	0
problem	11	20	6	7
cause	10	13	5	5

Table 11. Frequencies and co-occurrences of the "rural" code by newcomer and native-born. # Newcomer and # Native-born columns contain the number of individuals in that group in which the code or co-occurrences appears.

Rural (total 46 occurrences)	# Newcomer (n=13)	Total CO Newcomer	# Native- Born (n=10)	Total CO NB
frequency	12	32	7	14
local identity	9	20	2	3
other trades	11	22	3	3
common	6	11	5	5
unique	6	14	3	4

Table 12. Frequencies and co-occurrences of the "in-migration" code. # Newcomer and # Native-born columns contain the number of individuals in that group in which the code or co-occurrences appears.

In-migration (total 90 occurrences)	# Newcomer (n=13)	Total CO Newcomer	# Native-Born (n=10)	Total CO NB
frequency	13	54	10	36
local identity	10	20	8	19
attachment to place	11	16	2	3
past	11	21	8	15
nostalgia	6	6	3	0
present	10	18	7	3
future	0	0	3	1
solution	5	11	5	5

Temporal setting and plot

The temporal setting and plots of native-born and newcomer narratives also differed slightly. While “past” occurred with similar frequency and in similar contexts in each group, future, history, and nostalgia each differed (Tables 13, 14). Again, this shows the differing roles of macro narratives. All but one newcomer mentioned history at least once, compared with 6 of 10 native-born residents. Most newcomers associated history with local identity: the codes co-occurred in 10 of 13 newcomer interviews, and only 3 of 10 native-born interviews. Native-born residents instead associated history with in-migration (all 6 native-born interviews containing “history”), a sense of pride in their community, personal anecdotes, and economic conditions (5 of 6) (Table 13). In contrast with history, future was more common for native-born than newcomer participants (8, 6). Nostalgia was also more common, proportionally, for native-born (8 of 10) than newcomer (9 of 13). While the terminology used in the psychology of nostalgia classifies longing or attachment to historical conditions as “historical nostalgia,” this concept is difficult to identify in interview data. Instead, the co-occurrence of history and the NPF “decline” code can serve as a proxy for historical nostalgia. History co-occurred with “decline” 7 times in newcomer interviews and twice in native-born interviews. The nostalgia code as it is used here applies more to personal nostalgia. Thus, the higher frequency of nostalgia among native-born interviewees means personal or collective nostalgia is a greater influence for native-born participants than for newcomers, while the higher frequency of history (typically co-occurring with decline) for newcomers implies greater influence of historical nostalgia.

All native-born and 10 of 12 newcomers included a story of decline. For native-born participants, decline co-occurred with contextual problems 10 times, and with Graying itself as a problem and/or cause 9 times. It co-occurred with “struggle” 8 times, implying increased difficulty of commercial fishing. It also co-occurred 8 times with economy, connectedness, and outcomes/impacts. Newcomers similarly associated decline with both contextual problems (12) and Graying (10). In contrast, however, the next most common co-occurrences with decline were intergenerational business practices, local identity, rules, landscape, and in-migration (9 each). 8 newcomer “decline” segments were associated with a cause. This is compared with 7 native-born segments in which decline co-occurred with rules, and only 5 with in-migration. These differences could be because rules have always been seen as a challenge or problem to native-born residents, while newcomers have less direct experience with the impacts of rules and

regulations on the fishing industry and are more likely to see rule changes as overall changes in the plot. Similarly, newcomers attracted to the area for its natural landscape and rural character are more likely to see changes to those aspects of the place, including from in-migration, as declines.

The most disparate code between newcomer and native born was “improvement,” which occurred in all but one newcomer interview and only 4 of 10 native-born interviews. Within those, the code occurred 24 times in newcomer interviews (average twice per interview) and 15 times in native-born (3.5 times per interview). For newcomers, improvement was typically associated with contextual problems (15 co-occurrences), optimism (13), rules (9) and in-migration (9). For native-born interviewees, improvement was also associated with optimism (11 co-occurrences) and contextual problems (8), but, rather than contextual problems, rules and in-migration, more with anecdotes (11), heroes (9), and education (7). At least one narrative of improvement occurred in all but one newcomer interview, compared with only 4 of 10 native-born interviews. Newcomers typically associated improvement with contextual problems and in-migration, and 6 segments coded “improvement” were also coded with “rules” and/or tempered with a co-occurring plot of decline. Of the 4 native-born interviewees who referenced plots of improvement, all included a hero as part of that plot and were associated with education and in-migration. Improvement only co-occurred with hero 4 times in newcomer interviews. The role of heroes in plots of improvement is significant to understanding the role of perceived agency in policy narratives. Differences in the role of heroes and hero-victims between native-born and newcomer residents, especially where rural residents and natural resource workers are perceived as victims, could be related to differing perceptions of rural places as “backwaters” and as victims in macro narratives of rurality (Lichter & Brown, 2011).

Optimism, which is conceptually closely related to improvement but not inextricable, emerged inductively. Like nostalgia, optimism implies both emotion and temporal setting. Optimism occurred in a majority of interviews for both newcomers (10 of 13) and native-born participants (8 of 10), and both groups associated optimism with “economy” and “adapt.” Only half of native-born participants whose interviews contained optimistic segments associated a plot of improvement with optimism, whereas all newcomer interviewees containing optimistic segments had at least one segment in which optimism co-occurred with improvement. The temporal setting of future was more common for native-born participants than newcomers (Table

14), while improvement was more common for newcomers than native-born. Five of the 8 native-born participants that included the future in their narratives associated it with a plot of decline, 3 with improvement, 1 with neutral change, and 3 discussed the future with a sense of optimism. In contrast, 6 of 13 newcomers included the future in their narratives, with 5 co-occurrences of future + optimism. Future was discussed in the same segment as history 4 times in newcomer interviews, and with decline and improvement 3 times each. The differences in the co-occurrence of future, improvement and optimism between the two groups imply differing sources of optimism and perhaps differing attitudes about change and the future. A native-born Astoria/Warrenton resident described his perception of how newcomers see local identity and change:

“There’s a future, and as much as we have people who want to preserve it the way it is now, that’s never the long-term solution. Status quo is not really sustainable. You’re going forward or you’re going backward. And we have an awful lot of people who want to move here, buy a home and freeze everything to maintain the pretty little community.”

Table 13. Frequencies and co-occurrences of "history" by newcomer and native-born. # Newcomer and # Native-born columns contain the number of individuals in that group in which the code or co-occurrences appears.

History (total 48 occurrences)	# Newcomer (n=13)	Total CO Newcomer	# Native- Born (n=10)	Total CO NB
frequency	11	33	6	15
local identity	10	20	3	6
in-migration	9	16	6	11
pride	7	9	5	6
economy	7	11	5	7
anecdote	8	11	5	9
future	4	6	2	3
present	8	10	5	7
nostalgia	4	5	2	3

Table 14. Frequencies and co-occurrences of "future" by newcomer and native-born. # Newcomer and # Native-born columns contain the number of individuals in that group in which the code or co-occurrences appears.

Future (total 25 occurrences)	# Newcomer (n=13)	Total CO Newcomer	# Native- Born (n=10)	Total CO NB
frequency	6	11	8	14
hero	3	3	3	3
rules	2	2	3	4
history	4	6	2	3
decline	3	4	5	5
improvement	3	3	3	5
neutral	0	0	1	1

Characters

While heroes are constructed similarly in both groups when looking at temporal setting and the most common co-occurrences, there are differences in how each group constructs villains and victims. There was a slight difference in the temporal setting of hero segments, with more native-born participants discussing heroes in the present than past while nearly as many newcomers discussed them in the past as the present. This pattern is also borne out with the total frequency of co-occurrences: for native-born participants, hero co-occurred 7 times with present and 5 times with past, and 8 times with each past and present for newcomers. Villains and victims are both constructed in ways that reflect differing perspectives on rurality and the role of local commercial fishing. While more newcomers discussed “villains” in segments at least partially set in the past (5 interviews) than present (3), more native-born participants discussed villains in the present (6) than the past (3). “Victims” were discussed about equally in the past and present for both groups. “Local identity,” however, was among the most common co-occurrences for newcomers (8 interviews), but only 4 native-born participants associated local identity with victims. Outcomes and impacts, in contrast, was among the most common co-occurrences for native-born participants, suggesting that more native-born participants were able to connect victims with specific impacts besides changing local culture.

Discussion

Analysis of Graying using a combination of NPF and the lenses of rurality and nostalgia revealed important connections between the three lenses and was effective in contributing to an understanding of how Graying is constructed as a policy problem. The addition of temporal setting codes informed by rurality and nostalgia may be particularly significant to commercial fishing, but could provide insights into other policy problems as well. This analysis revealed a narrative of Graying that is consistent in many ways with previous findings on Graying and related fisheries issues: the profitability of fishing, particularly as relates to barriers to entry, is the most influential factor in decreased youth participation in the industry, but the difficulty of the work itself and broader cultural and economic shifts are also relevant (Caracciolo, 2017; Cramer et al., 2018; Flathers, 2017; Pascoe, Cannard, Jebreen, Dichmont, & Schirmer, 2015; Russell et al., 2014). In addition, NPF analysis revealed an overview of potential impacts to the community, several potential solutions, and “heroes” who would implement those solutions. These elements were influenced by newcomer status and the construction of a self-reliant but changed rural, natural resource identity.

It is important to note that distinctions based on newcomer status gloss over variation within those groups. While there were some noticeable differences between newcomer and native-born groups in the frequency and context of codes in this research, it may be more appropriate to distinguish between those who are currently or have previously worked in commercial fishing and closely related industries. As Nelson (2002) writes, “cultural differences appear to reflect class differences,” making it difficult to correlate that concern [with rural restructuring] with either ‘old’ or ‘new’ status” (p. 365). Personal financial or livelihood connection with the fishing industry could be a better way of understanding differences in the roles of nostalgia, history, and macro-scale narratives of rurality in narratives of Graying.

A. Nostalgia and Commercial Fishing

Understanding these influences could be particularly relevant to Graying because of how the triggers and functions of nostalgia relate to the nature of commercial fishing. Nostalgia is triggered by social interaction with individuals with shared experiences, typically relates to events experienced with mixed positive and negative affect, and functions to strengthen in-group bonds and self-image. In small, tight-knit communities that have experienced a long history of

challenges, changes, and dangers, such as commercial fishing, nostalgia is likely a common and important feature of the community. It is particularly relevant to note that nostalgia “attenuates the effect of mortality salience” on the readiness with which one thinks of death (Wildschut et al., 2006, p. 989)—a function that is clearly relevant to commercial fishing, one of the most dangerous industries in the U.S. (Davis, 2012). In fact, this process could also contribute to the underestimation of occupational risk by middle-aged commercial fishermen (Davis, 2012). Furthermore, commercial fishing is strongly influenced by institutional knowledge (Cramer et al., 2018; Russell et al., 2014), the discussion of which could prime individuals in and connected with the industry to think about the past. Finally, Wildschut (2006) found that nostalgia is associated with “redemption sequences”: a progression from a negative event to a positive or triumphant outcome, or simply an “it was for the best” perspective. This is consistent with the prevalence of highly individualistic, local solutions and heroes in this research. In thinking about past triumphs on a personal level, the self-image and image of the community with which one identifies, is affirmed as self-reliant and capable of overcoming obstacles. Since newcomers have less experience with these redemption narratives and likely weaker bonds with the commercial fishing or ancillary industries, they may be more likely to bemoan the struggles and challenges, rather than focusing on the triumphs, capabilities, and current solvable problems.

B. Narratives, Persuasiveness, and Nostalgia

Extensive research has been done on the persuasiveness of narratives in debate and media, and is incorporated into policy process theory primarily through Narrative Policy Analysis and the Narrative Policy Framework (McBeth et al., 2014; Sabatier & Weible, 2014). Anecdotes were an important feature in these narratives, and many anecdotes were at least partially set in the past. Statistical evidence was rare in these interviews, and some interviewees even used their lack of statistical evidence as an illustration of their lack of knowledge about Graying and the commercial fishing industry generally. There is mixed evidence as to whether anecdotal evidence is more or less effective than statistical evidence in debates and policy narratives (Han & Fink, 2012). “Transportiveness” or “vividness,” however, increases the effectiveness of narratives, particularly of anecdotal evidence (Green & Brock, 2000; Han & Fink, 2012; McBeth et al., 2014; Shanahan, Jones, McBeth, et al., 2018; Stern, 1992). While Han and Fink (2012) demonstrate that anecdotal or “narrative” evidence can have a low level of

vividness and it is actually the vividness, rather than the type of evidence, that matters most, for the most part vividness is more naturally linked with narrative evidence than statistical evidence.

The role of evidence in persuasiveness is relevant to this research not only because of the prevalence of anecdotal evidence, but also because of the connections between nostalgia and vividness. Nostalgic anecdotes in this research appeared to have vivid, specific details that could be used as indicators of personal nostalgia in interview data, but also have implications for how transportive the policy narrative is. Nostalgia was more common among native-born participants than newcomers, and it is unclear whether the overall, aggregate policy narrative is similarly transportive. Rather than personal nostalgic anecdotes, more newcomers drew on history and the role of commercial fishing in the local culture. The history of commercial fishing was seen as an important part of the local culture. This does not necessarily imply historical nostalgia, but using history as a proxy for historical nostalgia was appropriate in this case because history was often connected with a narrative of decline or of pride in the community—both of which are characteristics of historical nostalgia (Baldwin et al., 2017; Stern, 1992).

Historical nostalgia has been shown to have some similar effects as collective nostalgia (personal nostalgia of a shared experience), particularly the strengthening of in-group bonds, and even coping-like processes such as mitigating guilt (Baldwin et al., 2017; Cheung et al., 2017; Wildschut et al., 2014, 2006). Differences between personal nostalgia and historical nostalgia, and how the two relate to the construction of graying, have implications for the content and effects of the policy narrative. When residents highlight the history of commercial fishing in the area, it is sometimes the history of commercial fishing that is framed as the most important thing to the community, rather than commercial fishing itself. Both newcomers and native-born participants are concerned with the “ripple-out” effects that have occurred or would occur with a significant decline in the local fishing industry. As the co-occurrence between victim and local identity in newcomer interviews, and between victim and outcomes in native-born interviews demonstrate, newcomers are more likely to both refer to history as important and to focus on cultural impacts of commercial fishing problems at the expense of more specific or tangible impacts.

This pattern could be beneficial in that it expands the victim population to the whole community (McBeth et al., 2014), but detrimental in that it implies preserving the history and culture is more important than maintaining or restoring a thriving local commercial fishing

sector. This pitfall is hinted at in some of the newcomer interviews, typically through the faith that the fishing industry would fare well enough as long as there were some youth entering the industry. In one instance an interviewee expressed similar optimism about what would happen if there was consolidation in the fishing industry, in contrast with other discussions of consolidation among interviewees with more direct knowledge of the industry. This interest in maintaining fishing culture is reminiscent of differences in the importance of meaning and place between newcomers and native-born residents. Previous research on place attachment in rural settings has shown newcomers typically value places and landscapes more for aesthetic values than economic ones, while native born residents place more value on the economic value of places (Fitchen, 1991; Golding, 2012; Nelson, 2002). This finding is also confirmed more specifically in this research in the more common occurrence of “landscape” in newcomer interviews than native-born interviews. Together with the results on history, and victim and local identity, these results suggest that the general aesthetic value of fishing may overshadow issues that affect the size and profitability of the industry for those with less direct experience in the industry.

C. Characters, Rurality, and Narrative Effects

Additional differences between newcomer and native-born participants that could influence the effect and accuracy of the policy narrative relate to the temporal setting of heroes and villains, and the construction of hero-victims. While native-born participants mostly discussed heroes and villains in the present, newcomers discussed them in both the past and present. Relating this finding to the tendency for newcomers to discuss history, it could be that thinking about history primes newcomers to set some heroism and villainy in the past, thus creating temporal distance between aspects of the narrative in which characters exercise agency. Similarly, hero-victim co-occurred with history and nostalgia in newcomer interviews but not in native-born ones. While the hero-victim character can be empowering for a community seeking to create its own solutions and adapt to externally imposed challenges, it can also be blind faith in the resilience of the victim or community. Historical examples of hero-victims adapting could lead to complacency or a sense that outside help is not needed, although it could also be a call to action for those involved in the fishing industry and supporting industries or organizations.

The sense of a call to action was evident in several interviews with individuals involved in ports and marinas, and is consistent with research showing individuals with tendencies toward personal nostalgia have a “stronger need to achieve” (Batcho, 1998 p. 419). The Tillamook Food Trail could also be evidence of the commercial fishing culture and hero-victims narrative being effective on the local level: county-level individuals, including newcomers, saw the importance of commercial fishing to the local culture and economy, feel a connection and pride in local natural resource culture, and incorporated commercial fishing into an economic development event that could improve the market for locally caught fish on a larger scale. At the same time, interviewees, especially native-born residents and those more closely connected with commercial fishing, were clear that awareness and marketing efforts were just one piece of the puzzle. Such solutions could gloss over other problems and needs such as impacts of Graying and its causes on local youth, the perceived need for policy and management change, and the need to support critical fishing infrastructure and ancillary industries.

Finally, the influence of concepts of rurality are significant to the policy narrative and how it might be interpreted by policymakers at multiple levels of government. Kelsey (1994) describes agrarianism as a concept that

“holds that farm life produces people better people and that farmers are more democratic, honest, independent, virtuous, self-reliant, and politically stable than city dwellers. At the same time, however, this vision recognizes that the farming life is full of hardships. Work is tiring, income is low, and farmers have little control over the prices they receive” (p. 1172).

Kelsey documents how the agrarian ideal was used to “obscure” farm safety issues in the 1970s, in spite of the many inconsistencies between agrarianism and the realities of modern agriculture. Many of the characteristics of agrarianism are transferrable to images of self-reliant and hard-working commercial fishermen, although stereotypes of fishermen also have a rougher, more “wild West” quality. This overlap arose in these interviews in part through faith in the hero-victim, but also in the prevalence of the difficulty, dangers, or struggles of commercial fishing. The greater co-occurrence of “struggle” in newcomer interviews compared to native-born interviews has several implications for the application of NPF, rurality and nostalgia to commercial fishing.

First, native-born residents may be less focused on “struggles” of commercial fishing because of desensitization to the danger and difficulty of commercial fishing. A study by Davis

(2012) found that fishermen undervalue the risk of their work, and that middle-aged fishermen were more likely to undervalue risk than their younger or older counterparts--i.e.

“overconfidence grows and then wanes with time” (p. 28). A quote from one native-born interviewee illustrates the way risk and struggles are set aside:

“You don’t work in a manufacturing plant and walk out with the story ‘I almost died today.’ We frown upon that. In fishing it’s not considered that bad. You know, fishermen joke about it [...] I say that very flippantly [but] it’s a very serious issue”

Pascoe (2015) found that the difficulty of commercial fishing was one reason for fishermen wanting to exit the industry in Australia, but that the majority of participants did not plan on exiting before retirement age and that income from commercial fishing was the primary determinant of “desire to leave.”

Second, the prevalence of “struggle” among newcomers opens the door to “blame the victim” narratives while limiting perceived opportunity and motivation to solve the Graying problem. While Kelsey (1994) notes a sense of debt owed to farmers for their strenuous efforts in food production, it was not enough to overcome the “self-reliance” image. The combination of a history of struggling, the perception that struggling and danger are inherent in the industry, and that those participating in the industry are inherently resilient and self-reliant creates a narrative in which A) one of the major problems (danger/difficulty) cannot be solved, and B) the solution arises naturally from victims adapting. While the hero-victim character could be empowering to local residents, in higher levels of government it could undermine perceived need for policy solutions.

Policy Recommendations

The results of this analysis support several recommendations regarding Graying of the Fleet, some of which relate to the substantive issue of Graying and some of which relate to the policy narrative about Graying. Recommendations for ways to address Graying emerged from these interviews and were identified through inductive coding. Analysis using the Narrative Policy Framework allows for further recommendations about how to approach or change the Graying policy narrative.

First, research done or used by government entities like NOAA are part of the policy process by influencing the policy agenda, problem perception, and availability of different types of evidence in policy narratives (Stone, 2011). This research is one of many efforts guided by National Standard 8 of the Magnuson-Stevens Fisheries Management Conservation Act, which encourages research on and mitigation of economic impacts of fisheries policy and management. Future research on Graying that seeks to inform fishery policy and management is a policy decision, and should keep in mind that the effects of Graying depend in part on what aspect of the fishing industry is or is not Graying. While permit holders may be, on average, over 50 years old, many boat captains, skippers, and crew members are younger. Several interviewees mentioned this gap, especially when they did not perceive graying as a problem or when I clarified the question about the average age of commercial fishermen to say, “permit holders.” The full picture of Graying has not been captured in studies that focus solely on permit holders, and it is unclear how the distribution of benefits and risks affects non-permit-holding commercial fishermen. Data on permit holders are likely sufficient to understand one impact of Graying—inequitable access to the benefits of commercial fishing—but does not capture some of the most prominent concerns among participants in this study, such as intergenerational knowledge. If Graying is occurring in all roles in commercial fishing and there is an abrupt generational transfer when the current cohort of fishermen retire, there could be a loss of the institutional knowledge that is key to a successful commercial fishing business (Russell et al., 2014). As one interviewee pointed out though, crew members are analogous to apprentices, suggesting that the concern with loss of institutional knowledge may be unfounded if Graying is not happening beyond the permit holder role. Future research should study Graying and related problems in multiple roles in commercial fishing to provide a better picture of the industry, what

demographic changes are occurring, how consolidation is or is not occurring, and the distribution of costs and benefits from such changes in port communities.

The cost of entering the fishing industry was a concern to participants that is related to Graying, but is a distinct and more salient problem to participants in this study. Even in Garibaldi, where several participants with direct experience in the commercial fishing industry said Graying is not a significant trend, participants were concerned about the cost of entering the fishing industry, and the difficulty of saving money for “feast or famine” cycles and retirement. In some fisheries, such as clams in the Tillamook Bay, there is even a cost to enter a lottery to receive a permit, without certainty that applicants will receive a permit in return for that investment (newcomer Garibaldian). Furthermore, the costs are related to regulatory complexity. The costs, complexities, and uncertainties throughout the commercial fishing process could be deterrents to young people considering a commercial fishing career. These challenges have been well-documented in previous research on Graying (Caracciolo, 2017; Carothers, 2015; Cramer et al., 2018; Flathers, 2017; Russell et al., 2014). Cramer et al. further note that regulatory complexity has motivated some pressure among commercial fishing families for youth to obtain a college degree before taking over the family fishing business, or pursuing a different career. Several participants saw the decisions many young people make to leave their coastal home and not go into commercial fishing as ‘the smart choice’ (paraphrased, multiple interviewees including). Because of these challenges and the danger inherent in commercial fishing. At least one participant (newcomer Garibaldian) mentioned there may also be barriers to exit: some retiring fishermen do not have retirement savings, but instead plan to sell their boat to help them retire.

One policy recommendation that arises from the discussion of the increased costs of commercial fishing is to improve aspiring and current fishermen’s ability to adapt and cope by improving education. Most participants identified education about financial literacy, business and retirement planning, and similar management skills as a crucial piece of a solution for Graying- and costs-related problems in the commercial fishing industry. As one native-born Astoria/Warrenton resident noted, “fishing is more of a business today than it used to be.” Some interviewees identified aspects of such business education that are achieved through observation, experience, or institutional knowledge. For instance, diversification into multiple fisheries is a strategy that one native-born Garibaldi fisherman observed youth taking early on: “I think some

of these young guys are a little bit more... I mean they've watched us learn to diversify and I think they're coming into it with their feet on the ground already” (native-born Garibaldi resident). Flathers (2017) recommends supporting such mentorship-type education.

Education was the most strongly emphasized solution, but cannot solve the problem completely. Other recommended solutions included communication with the public and with policymakers, and policy change. Communication about Oregon’s commercial fishing industry was a prominent theme, particularly among newcomers. Often these communications emphasized reaching profitable markets with messaging about the sustainability of Oregon’s fisheries and the importance of buying local, wild-caught fish. In the Garibaldi-Tillamook area, several interviewees were optimistic about this solution because of their proximity to Portland and their knowledge of existing efforts to improve marketing and awareness of the area’s commercial fishing industry. Similarly, communication to policymakers and improved stakeholder engagement from policymakers included narratives about the improved sustainability of commercial fishing in addition to those about the detrimental impacts of regulations (Calhoun, 2015; Caracciolo, 2017; Cramer et al., 2018; Flathers, 2017; Russell et al., 2014).

As the foci on educational and communication solutions would suggest, common heroes were local community colleges, local economic development and support organizations, and state support organizations like Oregon Sea Grant. On the state and national level, such organizations could be important facilitators of policy solutions to Graying and related problems. State and national level support for local solutions through these organizations could also contribute to improved policy outcomes. On the local level, local governments can participate in communication and marketing strategies in addition to supporting and leveraging local educational and technical support organizations. More specific but less common solutions that emerged include improved access to loans or other forms of financial support. This option is discussed in previous research on the impacts of rationalization (Pomeroy et al., 2015).

It is unclear whether narratives about commercial fishing that highlight the history of the industry contradict these messages, or whether the role of commercial fishing in local and state culture supports the motivation for policies in support of the industry. One limitation to communicating a clear message about current commercial fishing is that newcomers and community leaders who are removed from commercial fishing (but closer to influential

policymaking processes) have limited knowledge or direct experience relating to commercial fishing. Instead they rely on macro-narratives of commercial fishing (especially the history of fishing) or personal nostalgia of earlier commercial fishing experiences. For instance, one participant was able to expound on modern changes in agriculture and forestry that improve the sustainability and image of those industries, but focused more on the history of commercial fishing. The same participant explained that the main way he and other relative outsiders gain an understanding of natural resource industries is through tours, which is generally not feasible with commercial fishing. While charter fishing-type excursions could lend some perspective, differences between commercial and charter fishing, and tension between the commercial fishing industry and recreational fishermen limits the usefulness of this approach.

Discussions of communication with policy makers also emphasized the importance of fair representation in decision-making, and evokes one benefit of NPF in understanding and influencing policy change through narrative. This analysis found that Graying of the Fleet is not the central policy problem in this narrative, suggesting it needs to be attached to a 'policy surrogate.' A policy surrogate is typically a simpler, less controversial policy problem used to debate and expand the scope of a complex or controversial policy problem (McBeth, Shanahan, Hathaway, Tigert, & Sampson, 2010). Graying is perceived to have a complex set of causes, including broad and potentially uncontrollable shifts like the out-migration of youth from rural areas, and it is not a salient issue due in part to its specificity to particular places and to a small population when only thinking about its direct effects. Although most participants in these interviews recognized that the direct effects of any issue facing the commercial fishing industry are only the beginning of the story, voters and policymakers outside of major port communities are unlikely to recognize how intertwined commercial fishing is with other aspects of coastal economies and life.

To address Graying through policy change, therefore, would be more effective to attach it to a policy surrogate such as other cost- and regulations-related problems in the commercial fishing industry or similar problems in other industries. Interviewees in this study seemed to already be doing this by emphasizing the multiple challenges to commercial fishing and making comparisons with agriculture. In Oregon, attaching Graying to agricultural heritage could be an effective strategy considering the establishment of the Oregon Agricultural Heritage Program (OAHP) in 2017. Many of the causes, concerns, and impacts of agricultural heritage problems

are similar to Graying (e.g. financial literacy and succession planning), making it an easy surrogate to link with. This approach, however, would likely neglect to address the problems interviewees saw as broader and more important than Graying (e.g. costs generally, political representation and stakeholder engagement).

Nie (2003) argues policy surrogates are, in fact, a driver of natural resource conflicts themselves and a reason why natural resource conflicts are often intractable. When specific, relatively straight-forward policy problems are used as policy surrogates for broader, deeper conflicts over values, the surrogate becomes intractable as well. Using OAHP as a surrogate for Graying is different in that both are specific problems within a broader context of natural resource management changes and urban-rural conflict. Surrogacy between OAHP and Graying expands the scope of stakeholders without expanding the problem into more complex, potentially controversial aspects of fisheries management. OAHP had the advantage of a wider target audience and greater visibility even among those without direct connections with agriculture, plus long-standing related policy (Oregon's urban growth boundaries). Agricultural heritage problems and Graying have similar causes, victims, and solutions: e.g. increased barriers to entry, challenges to retirement and succession, external threats to the idealized image of the industry (consolidation, land use conversion), victims with a largely positive macro-level narrative of strong work-ethic and self-reliance. OAHP primarily uses conservation easements as the financial assistance mechanism for new farmers. While this solution does not specifically exist for commercial fishing, another solution does overlap: apprenticeships and support networks like Rogue Farm Corps (named for Oregon's Rogue River) and the Alaska Young Fisherman's Network. The Young Fisherman's Network's variety of fellowships, from seafood business, to fisheries management and policy, to marine conservation, also demonstrates how a combination of economic viability of natural resource use and environmental goals can be combined in the solution, similar to OAHP's easements. Other ways co-benefits can be used to solve the Graying problem should be explored.

Limitations and Positionality

In this research I tested the application of NPF in conjunction with a rural sociological lens to a natural resource policy problem. Graying of the Fleet is just one specific problem whose particular context and low salience may limit the applicability of these results to other policy problems. In addition, because of the novelty of using rural sociology and nostalgia lenses to analyze the setting element of NPF, the operationalization of these lenses as setting codes is imperfect. This research contributes an important first step in better understanding the roles of geographical and temporal setting, and macro narratives about the setting, in policy narratives about rural problems.

Conclusions about the phenomenon of Graying in Oregon are also limited by the narrow scope of this research. For this study, few individuals directly involved in commercial fishing were interviewed, and the geographical scope was limited to Astoria, Warrenton, Garibaldi and Tillamook. Quantitative and descriptive data about interviewees and about the local commercial fishing industry were not collected.

During data collection and analysis, I attempted to maintain an open, neutral approach to the greatest extent possible. Following Gray and Jones's (2016) argument that "all Qualitative NPF researchers, regardless of epistemological position, should aim for transparency in their research design" (p. 198), it is important to recognize that objectivity is an aspiration that is not fully attainable. I acknowledge my positionality could influence the interpretation of these results. My academic influences include both natural sciences and social sciences. A dual bachelors' degree from Willamette University in Biology and Environmental & Earth Sciences (social science emphasis) was formational in my interest in sustainable natural resource use. My bachelor's thesis research on Confined Animal Feedlot Operation policy provided me with on-site observation of animal-based food production at multiple scales. This experience cultivated a skepticism of some classmates', neighbors' and teachers' assumptions that commercial agricultural operations are often or even mostly "bad actors" or inherently unsustainable. Like NPF, my assumptions are most aligned with social constructivism, with some limitations. This perspective arose in part from ethics and history courses at Willamette University, and from courses in the Master of Public Policy program at Oregon State University. My personal influences include being born and raised in Santa Cruz, a coastal town in California. Unlike my

research locations, the town is not rural, and was most influenced by a long history of tourism (beginning with the “Neptune Baths” in 1884) rather than commercial fishing.

Future Research

This research is part of a broader program in which specific questions about Graying of the Fleet in Oregon are being explored:

- In what ways have management decisions and other external drivers of change (e.g. demographic, economic, technological and environmental factors) impacted the ‘graying of the fleet’?
- In what ways have management decisions and other external drivers of change impacted intergenerational family business practices?
- In what ways might the ‘graying of the fleet’ impact the socio-economic dependency and resiliency of coastal residential communities?

These questions were beyond the scope of this paper, although some of these questions were partially addressed and can be addressed using the same data. Future research on this project include addressing the questions above through data collected for this specific research and data that are being collected from commercial fishing families in Astoria, Warrenton, Garibaldi and Tillamook.

Beyond the Oregon State University Graying of the Fleet project, this research highlights several topics for further research. The combination of rural sociology and nostalgia lenses with NPF was useful in understanding Graying of the Fleet, and would likely be useful in application to other rural policy problems. Future research could analyze similar problems in agriculture and forestry, and compare the role of nostalgia between different industries or places. The NPF-RS framework could also be applied to phenomena like migration that are important in rural studies literature. Researchers should continue to refine the operationalization of rural sociological and temporal setting codes for application to interview data. Drawing further on rural sociology, psychology, rhetoric and advertising research to develop a way to apply these codes to document, image, video, and survey data could also be a fruitful avenue for research.

The rurality codes used here need further testing and refinement. Some excerpts from these interviews suggest that analogies and phrasing emphasizing hard work and masculinity are likely related to the influence of a Western version of the rural idyll. Analogies and contrasting

rural places, people, or phenomena with urban counterparts also appear significant to identifying the rural idyll in interview data. The Western rural idyll, which could perhaps more accurately be called the frontier ideal, also involves a sense of self-reliance, resilience, and responsibility that could be related to the emergence of the hero-victim, “adapt” solutions, and even the hero-villain. Further research is needed to understand the role of these concepts in policy narratives. Each of these codes, and “optimism,” also relate to the agency of individuals involved in policy narratives, which could be further explored. The hero-victim character could be reframed as an “attributing agency” strategy, but the agency is exercised in the victims’ role in solutions rather than in causes, as would be the case in a victim blaming strategy. The hero-victim could be empowering on a local level and could bolster collective action, but it could also be a way for decision makers to sidestep responsibility. The presence of both a hero-victim and hero-villain presents an interesting need for collaborative, grounded policy solutions and may be common in situations with wicked problems or related examples of collaborative governance.

Temporal setting codes, especially nostalgia, history, and optimism, also need refinement. Nostalgia is sometimes difficult to identify systematically in interview data, but a more comprehensive review of research on the psychology and rhetoric of nostalgia could assist in better defining the code. In this project, there seemed to be a relationship between specific imagery and nostalgic anecdotes that could be useful in operationalization. For example, a native born Astorian and native-born Garibaldian both talked nostalgically about their childhood as a way of describing their community and the culture, and used specific imagery to illustrate these experiences:

“We would then--I think it was a dime or a quarter or something to ride the ferry across to Washington, it was a big thrill. And the scents that I have--scents like s-c-e-n-t-s--is you know we had our plywood mill here, which has since closed. So, you had the smell of the plywood being processed, and then bumblebee seafoods was the big employer back in my youth. It employed hundreds of people. So, you had the fish cooking. So, you had those two scents wafting through, and now it's craft beer here in Astoria and other places where you have the smell of the hops and the brewing process.” (native-born Astoria/Warrenton resident)

“Some kids grew up on a farm, I grew up on the docks. Some kids played fireman, I played fisherman. I climbed on the back of boats, acted like I was a commercial fisherman when I was a little kid.” (native-born Garibaldian)

The relationship between nostalgia and learning from the past, whether the two can be distinguished and how they are distinct (if at all) should also be explored.

In addition, temporal setting codes could be applied to policy narratives independent of rural sociological setting, in urban, rural, or mixed settings. Based on macro-narratives discussed in rural sociology, policy problems associated with rural places, activities, or characteristics would likely more influenced by “past,” “history,” and “nostalgia” settings and tones than would urban topics. This could be specific to industry: e.g., manufacturing narratives, particularly in the “Rust Belt” region, could be influenced by past and nostalgia in very similar ways to rural natural resource narratives. Temporal setting could be particularly useful in understanding “punctuating events” in policy change and policy narratives.² More specifically, temporal setting could help identify how different types of events impact policy narratives and the policy process, how soon after the event are effects seen at different levels of policy narrative, how long after the event are effects seen, and the geographical scope of the effects in the policy narrative and in policy change.

In this project two events were influential in the policy narrative, with differing timing, cause, and effects. Gillnetting restrictions were a policy that was put in place in 2012 and emerged in narratives in both Astoria/Warrenton and Garibaldi/Tillamook, despite the fact that the policy only directly impacts Astoria/Warrenton (and other Columbia River communities not included in this research). The gillnetting “ban,” while not a typical punctuating event in that it is itself a policy, may have impacts on commercial fishing-related policy narratives that are similar to the impacts of punctuating events. The policy appeared to have a simple causal explanation in these narratives, with a victim that could even be specified to one or two individuals. The other event was the crab season delays, which was concurrent with most of these interviews. The crab season delay had two causes, with one environmental cause connected with one policy-related villain and cause (policies about crab quality and size), and one corporate villain and cause (price negotiation with processors). This event seemed to be less influential in relative “outsider” narratives than one would expect with a concurrent event, and the complex cause sometimes led to “the system” being the villain (Stone, 2011), with the solution being improved fairness in decision making. There were also hints of uncertainty about whom to blame, what exactly the

² Punctuating events are events that spur policy change, as described by the Punctuated Equilibrium Theory in policy process theory. Elements of PET, including the concepts of punctuating events and “feed-forward” dynamics, also inform NPF (Sabatier & Weible, 2014).

problem was and what could be done about it. These two events cannot be meaningfully compared because of their many differences, but comparison of more similar events and analysis using NPF with temporal setting codes would likely be a useful avenue of research for understanding punctuating events.

Further questions about the role of nostalgia in policy narratives include: Does nostalgia evoke hope for the future as Bradbury suggests, or does the past setting inhibit solutions-oriented thinking? Routledge, et al. (Routledge et al., 2012) find that nostalgia attenuates the effects of low perceived meaning when research participants viewed absurdist art. Does this suggest nostalgia could also strengthen the narrativity of policy narratives?

Conclusion

The average age of commercial fishermen on the West coast is increasing: Russel et al. (2014) found that the average age of Pacific Groundfish Fishery permit-holders was in their early 50s, and that fewer young people are obtaining permits. This pattern is concerning because it could be a sign of inequitable access to the commercial fishing industry, likely due to increased barriers to entry such as the cost of permits in quota-regulated fisheries (Carothers, 2015). Ultimately these changes could affect the resilience of the commercial fishing industry and port communities as economies shift, employment opportunities for youth become more limited, and outmigration of rural youth continues (Caracciolo, 2017; Carothers, 2015; Flathers, 2017). The causes and impacts of the Graying of the Fleet phenomenon have been and continue to be studied. This research provides insight into another way to understand Graying of the Fleet: the construction of Graying as a policy problem.

I approached this task through the Narrative Policy Framework and the lenses of rural sociology and nostalgia. Rural sociology and nostalgia were useful in further developing the setting element of NPF. These lenses contributed to answering two main research questions:

1. How do nostalgia and concepts of rurality influence the framing of major narrative elements (especially the problem, setting, and solutions) in these narratives?
2. How, if at all, do narratives among relative “insiders” to the rural and commercial fishing communities differ from those among relative newcomers or individuals without commercial fishing experience?

I found that in the narratives that emerged from these interviews, Graying of the Fleet is a subplot to broader policy problems in the commercial fishing industry and rural communities. Nostalgic tones and past settings were common when discussing the role of commercial fishing in local culture, but less prominent when discussing specific problems. Ideas about rurality, including comparisons between Graying and other problems that are common to natural resource industries or rural communities, and an idea of rural hard work and self-reliance, were important aspects of the setting through which participants understood Graying. Newcomers and native-born participants differed in their use of rural idyllic or frontier ideal concepts of rurality (e.g. “struggle,” “rural”), the type of nostalgia or past setting (historical vs. personal), the extent to which they identified specific outcomes/impacts and solutions, the frequency with which they

described narratives of improvement, and the frequency with which they used a “future” temporal setting.” These differences may interact with the extent to which each group relies on macro narratives, compared with personal experiences in the local community and commercial fishing industry.

There are several policy recommendations that emerged from this analysis. First, there is a need for both financial and educational support for young fishermen and even retiring fishermen. Business management, retirement and succession planning were specific areas where education was deemed important. Ensuring that institutional or intergenerational knowledge from older fishermen could be passed on to new fishermen was also an important part of the solution to participants in this research. Second, communication with the public and policymakers was important to solving contextual, more salient problems like the need to get a good price for locally caught fish, and perceived unfairness of policy decisions about commercial fishing. An example of communicating with the public (and to some extent policymakers) was the North Coast Food Trail. Communication with policymakers, however, called for more comprehensive changes including better stakeholder engagement and better representation of coastal and natural resource representatives in decision making venues. The main recommendation for the narrative about Graying is that it requires using a policy surrogate such as agricultural heritage.

Finally, this analysis opened new avenues of future research by testing a combination of NPF and rural sociology, new temporal setting codes, and emergent NPF codes like the hero-victim. Future research should refine the NPF-Rural Sociology framework and develop other setting codes for urban and mixed settings, and refine the temporal setting codes. The new hero-victim and hero-villain characters, the “adapt” strategy, and “optimism temporal setting/tone” should also be explored. The role of agency and resilience in policy narratives also merit further investigation.

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Appendices

A. Interview script

Introduction

Thank you for meeting with me today. I know you have a busy schedule, and I appreciate you taking the time to share your perspective on this important topic affecting coastal communities.

About me

Public policy graduate student at OSU

Originally from Northern California, a little south of San Francisco, but I've lived in Oregon for almost 6 years.

This project caught my eye because I'm interested in how communities work together to address challenges or changes in natural resource industries.

About the project

We have two major goals:

- First, I am hoping to capture some stories about what it is like to be involved with fishing or living in a fishing community in Oregon.
 - This will contribute to a NOAA (National Oceanic and Atmospheric Administration) project called Voices from the Fisheries.
 - We want to give people a better understanding of what it's like to be in fishing communities on the Oregon coast.
 - This goal is why I need a video camera--there are already quite a few videos from the east coast and we want to make sure West coast fishermen are also heard (and seen). It also means you'll have my full attention because I won't need to take as many notes!
 - So, with your permission, I can share your perspective with NOAA to post on their Voices of the Fisheries website. Here is a form that allows that.
 - If you'd like, I'm happy to share clips of what we'd like to send to NOAA before they're posted.
- The second goal is a semi-structured interview to contribute to research on if and how aging of the fishing fleet is happening, as well as who's affected and who's not affected in Oregon fishing communities.
 - The university has research guidelines--here is a copy
 - The key point here is that your participation is voluntary, and you have the right to not answer questions or to end the interview at any point
 - Also feel free to ask me more questions about the research

Overall the interview should take less than an hour.

Start Video and Voice Recorder

This is Anna Freitas on [date]

We're here in [place] with [person]

Interview Questions

1. I'm going to start with a broad question: could you tell me a little bit about what it's like to live in a fishing community?

- a. What are the people like, in terms of demographics and culture?
 - b. What kinds of businesses and industries are here? Is it highly specialized?
 - c. How would you describe the environment or landscape? (including in town)
2. How economically and culturally important is the fishing industry to [PLACE]
3. Have you seen a lot of intergenerational fishing-related businesses in [PLACE]?
4. There are data indicating that the average age of commercial fishermen is in the 50s. In your opinion, has this always been the case, or is the fleet “graying”? What do you see here in [PLACE] that agrees or disagrees with this?
 - a. What might be behind this trend/pattern?
 - b. Why do young adults want to/not want to get into fishing related businesses?
 - c. What is or might be the impact on the fishing community over time?
 - d. Please share your thoughts about how this will ripple out to supporting industries over time
5. What is or might be the impact of this in [PLACE] more broadly, or other coastal towns?
 - i. What are some potential impacts of this graying? Social, cultural, economic, environmental
 - ii. Are there negative impacts? If so, to whom?
- b. What are other options for careers for young adults in [PLACE]?
- c. Is there a “tipping point” for the impact of an aging fleet? In other words, what would happen in [PLACE] if most (or all) of the family fishing businesses were sold?
- d. Is there anything that could be done, or is being done, to adjust to these changes?
 - i. Who has the ability to make these adjustments? Who or what group would make these changes?

Concluding

Thank you for your time and insight, [person].

Before I go, is there anyone else you think I should chat with?

If you have any questions in the future don't hesitate to contact me or Lori.

Thanks again, and enjoy the rest of your day/afternoon/evening!

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B. Codebook

Attached as Word Document table.

