

RESEARCH ARTICLE



Divergent values and perspectives drive three distinct viewpoints on grizzly bear reintroduction in Washington, the United States

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Abstract

1. The success or failure of apex carnivore reintroduction efforts can hinge on understanding and attending to diverse viewpoints of those involved in and impacted by reintroductions. Yet, viewpoints vary widely due to a suite of complex and intersecting factors, such as values, beliefs and sociocultural context. We ask, 'what are the diverse viewpoints that exist surrounding apex carnivore recovery and what kinds of emotional, analytical and values-based judgments might people use to construct their viewpoints?'
2. We used Q-methodology to identify distinct, generalized viewpoints and areas of overlap and divergence between them, surrounding a proposal to reintroduce grizzly bears (*Ursus arctos horribilis*) to the North Cascades Ecosystem, USA. Q-methodology combines qualitative and quantitative methods by asking purposefully sampled respondents to sort various statements on a given topic into an ordered grid.
3. We found three distinct viewpoints among 67 respondents using factor analysis and responses to open-ended questions about the sorting exercise. Two of these viewpoints represent essentially polarized perspectives corresponding to deeply normative notions about grizzly bear recovery, where one views reintroducing bears as a moral requisite, and the other views it as inappropriate and risky. These viewpoints primarily diverged on their perceptions of risk and perspectives about our collective responsibilities to and appropriate relationships with others (i.e. 'relational values'). The third viewpoint was distinguished by its prioritization of practical considerations and views reintroducing bears as *impractical and not sensible*.
4. Our analysis underscores the need to identify and attend to latent viewpoints that may be overlooked in the polarized public discourse as well as the multiple value systems and perceptions of risk that are integrated in perspectives on grizzly bear reintroduction. Additionally, our broadly defined identity groups were

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of very little utility in predicting viewpoints in this study, highlighting the importance of avoiding assumptions about people's views based on their identities and interests.

5. We argue that forefronting conversations about responsibilities and appropriate relationships is critical for finding acceptable paths forward in such recovery efforts. We discuss the management implications of these findings for the North Cascades grizzly bear reintroduction, and for other large carnivore reintroductions.

KEYWORDS

grizzly bears, human dimensions, Q-methodology, restoration, *Ursus arctos horribilis*, wildlife reintroduction

1 | INTRODUCTION

An increasingly common strategy for restoring biodiversity in the face of the ongoing extinction crisis (Barnosky et al., 2011; IPBES, 2019) is to reintroduce species to ecosystems where they are locally extirpated (Lorimer et al., 2015; Pettorelli et al., 2018). Apex carnivores are often focal species for reintroductions because they are disproportionately threatened by the compounding factors of habitat loss, persecution, prey depletion, and life history characteristics (Ripple et al., 2014; Wolf & Ripple, 2016) and disproportionately valued for their keystone ecological and cultural roles (Artelle et al., 2022; Garibaldi & Turner, 2004; Hilderbrand et al., 1999; O'Bryan et al., 2018). Encouragingly, reintroductions have already improved the conservation statuses of many species (Seddon et al., 2014; Smith et al., 2010; Soorae, 2018). However, many have failed to establish self-sustaining populations—in the cases where this was the goal—and success rates have been lower for carnivores and for threatened, endangered or sensitive animals (Griffith et al., 1989; Wolf et al., 1996). This is in part due to technical and sociopolitical difficulties, especially for apex carnivore reintroductions (Berger-Tal et al., 2020; Serota et al., 2023; Soorae, 2021). Wolf et al. (1996) found that 'public relations and attitudes' were the second-most commonly mentioned factors influencing success or failure among professionals involved with translocation programs, and Serota et al. (2023) found that over half of their 305 wildlife translocation case studies mentioned human dimensions as a lesson learned or major difficulty that they faced. Understanding these social dimensions in concert with the ecology of species reintroductions can therefore improve the likelihood of successful reintroduction (Consorte-McCrea et al., 2022; IUCN/SSC, 2013).

Social acceptability is a key driver of success or failure, such that places where local acceptance is low also have lowered likelihood of successful large carnivore reintroductions (Bruskotter & Wilson, 2014; Consorte-McCrea et al., 2022; Serota et al., 2023; Treves & Bruskotter, 2014). Social acceptability varies based on many intersecting contextual factors, such as beliefs, collective memory, personal and social values, individual and group identities, perceptions of risk, and emotions (Hughes & Nielsen, 2019; Jacobs et al., 2014; Madden & McQuinn, 2014; Nesbitt & Weiner, 2001).

BOX 1 Definitions of nature-related values (adapted from IPBES, 2022, p. 20)

Relational values: The meaningfulness of people-nature interactions, and interactions among people through nature (e.g. sense of place, spirituality, care, reciprocity).

Instrumental values: The worth of things as a means to a desired end (e.g. ecosystem services).

Intrinsic values: The worth of nature, species or habitats independent of people as valuers.

Some view apex carnivore reintroduction as important for restoring ecological composition, function and resilience; for cultural revitalization; and as a symbol of care toward future generations (Lee et al., 2021). Conversely, others are often concerned about safety risks, carnivore-livestock conflicts and costs (Clark, 2009; Treves & Ullas, 2003). Differences of opinions and preferences are often further rooted in socio-political divides and underlying symbolisms of carnivore management (Hughes & Nielsen, 2019; Mattson et al., 2006; McInturff et al., 2021). To some, these species actualize deep-seated political tensions surrounding power and control over natural resources and autonomy (Bruskotter et al., 2011; Hamilton et al., 2020; Nie, 2001), while to others, carnivores evoke strong, positive associations with perceptions of wildness and cultural heritage (Kellert et al., 1996; López-Bao et al., 2017). Social acceptability of apex carnivore reintroductions may also depend on perceptions and preferences about the reintroduction process itself, including notions of appropriate relationships between agencies, species, interest groups and landscapes (i.e. relational values, Chan et al., 2016, 2018, Box 1) such as how an agency engages local communities in planning for a reintroduction, or how animal welfare considerations are addressed.

Well-monitored apex carnivore reintroduction efforts around the world have demonstrated the important influence of social acceptability on the success or failure of apex carnivore reintroduction proposals. For example, in the Italian Alps, a dramatic shift

occurred from widespread acceptance to widespread opposition of a reintroduced population of brown bears, likely related to a nonfatal human attack, but also due to predation on ungulates, damage to agricultural resources, and emotional impacts (e.g. fear) on communities (Tosi et al., 2015). This shift in public opinion likely contributed to illegal killing of bears from the reintroduced population and ongoing sociopolitical tensions (Tosi et al., 2015). Two other brown bear reintroduction attempts also failed in Poland and Austria due to increasing human-wildlife conflicts that led to illegal killings of bears (Diserens et al., 2020; Kaczensky et al., 2011). Conversely, in Argentina's Iberá Peninsula, public opinion about a jaguar reintroduction program shifted from initial widespread ambivalence or negative opinions to greater public support as trust developed between local communities and the administering organizations, and people began to understand the social and ecological benefits of the program (Zamoni et al., 2017). This positive public image helped the program overcome logistical barriers, such as finding animal donors, gaining political approval and gaining external donors (Zamoni et al., 2017). Finally, Nesbitt et al. (2023) concluded that in recovering grizzly bear populations in Montana, normative beliefs about bears, their management and levels of trust in managing agencies affected whether residents believed the bear population to be too high or too low. These cases demonstrate the importance of understanding local communities' initial, in-principle levels of support for reintroduction proposals, the social and cultural factors that have shaped these perspectives, as well as how acceptance shifts and affects project outcomes as apex carnivore reintroduction proposals proceed through implementation.

Understanding diverse viewpoints on the acceptability of large carnivore reintroductions, how people construct them in context, and the structural differences among them are critical to preventing or mitigating conflicts that often pervade apex carnivore recovery efforts (Drouilly & O'Riain, 2021; Jacobsen & Linnell, 2016; Madden & McQuinn, 2014). Explicitly characterizing viewpoints (i.e. subjective perspectives based on various values, beliefs, preferences and priorities) and the logics associated with them can help to prevent misunderstanding of what is truly important to people, or "talking past" one another (Harrison & Loring, 2020). Furthermore, it can clarify and uplift intermediate perspectives that might be muted, stifled or overlooked in polarized public discourse so that policy-makers can give more balanced attention to the diversity of perspectives that exist. It might also reveal areas of consensus that could facilitate policy solutions or conversely highlight the core areas of divergence that would require resolution to move forward. Additionally, government agencies, which lead reintroduction efforts in many countries, do so on behalf of the public and are ethically (and often legally) required to attend to justice dimensions of their work. Understanding, fairly representing and considering diverse viewpoints of affected parties in decision-making is a recognition justice issue (Preston & Carr, 2020; Whyte, 2011). Thus, it is important for those agencies to understand varying perspectives toward reintroduction proposals.

Identifying distinct, nuanced viewpoints can be especially challenging in the face of contentious or polarizing carnivore reintroduction proposals. This is, in part, because people may be prone to voice the arguments they believe will be most impactful in management decisions, rather than those that may be most important to them (Mazur & Asah, 2013; Parthasarathy, 2010; Spaeder & Feit, 2005). It can be even more difficult to identify areas of consensus, as people vie to have their competing interests heard and prioritized (Mazur & Asah, 2013). In some cases, carnivore management has already become entrenched in identity politics that have driven communication breakdowns and policy gridlocks (Treves et al., 2017; van Eeden et al., 2021). This breakdown can lead to potentially erroneous assumptions, such as believing stakeholder groups are siloed in their attitudes and values toward large carnivores and their management, when they may have some shared values (Lute & Gore, 2018).

The objective of this paper is to better characterize the diversity of logics that interest groups draw upon, such as notions of appropriate relationships, usefulness and practical considerations, in considering and forming their views on large carnivore reintroductions and recovery. Understanding and acknowledging diverse viewpoints as legitimate allows for wildlife managers to build trust, anticipate and address conflicts, and lean into points of consensus (Bavin et al., 2020; Consorte-McCrea et al., 2022; Madden & McQuinn, 2014). This work further adds to theoretical understandings of the trade-offs and prioritizations of values—particularly relational values (Chan et al., 2016, 2018)—risks and identities. To that end, we ask: what are the diverse viewpoints that exist surrounding apex carnivore recovery and what kinds of emotional, analytical, and values-based judgements might people use to construct their viewpoints? We investigate viewpoints concerning one apex carnivore reintroduction proposal: the proposed reintroduction of grizzly bears (*Ursus arctos horribilis*) to the North Cascades Ecosystem in Washington State. Specifically, we sought to explore and characterize (1) latent viewpoints that are overshadowed or omitted in polarized public discourse about this proposal, (2) areas of consensus and disagreement among different viewpoints, and (3) degree of heterogeneity in viewpoints within and among stakeholder groups that are often portrayed as having unified and/or rival positions.

2 | CASE STUDY CONTEXT

The effort to recover a healthy grizzly bear population in the North Cascades Ecosystem of northern Washington State (hereafter 'Washington') and British Columbia has been ongoing for more than four decades, and like other carnivore management and restoration endeavours (Bruskotter et al., 2011; Richie et al., 2012; Salo et al., 2017), proposals to reintroduce the bears have been socially and politically charged. Grizzly bears were listed under the US Endangered Species Act in 1975 after being hunted to near extirpation following European settlement. In the 1993 revised recovery plan for grizzly bears, the North Cascades Ecosystem in Washington and British Columbia (hereafter 'North Cascades') was

designated as one of six target ecosystems for recovery efforts (USFWS, 1993). However, the last confirmed sighting of a grizzly bear in the Washington portion of the North Cascades was in 1996, prompting calls to reintroduce bears through translocation (USNPS & USFWS, 2017). In 2014, the US Fish and Wildlife Service and National Park Service began preparing a Draft Environmental Impact Statement on grizzly bear restoration in the North Cascades, which was available for public comment in 2017.

The proposed reintroduction received an enormous amount of public interest. The agencies held over 120 public meetings and stakeholder briefings, and they received over 144,000 public comments on the Draft Environmental Impact Statement. Of the approximately 21,200 comments from identifiable Washington residents, over 88% of them were generally supportive of grizzly bear restoration, citing ethical or legal obligations, benefits to the ecosystem, or the importance of bears to cultural and natural heritages (Santo, 2021, unpublished data). However, there was still significant opposition from some community groups for many reasons, including fear of being attacked by bears, concerns regarding their access to wilderness or maintenance of rural livelihoods, and disbelief that the habitat could support bears or that a reintroduction would be appropriately managed. Support and opposition was mixed among many community groups, such as recreationists, local residents, and wilderness advocates from diverse geographic areas in Washington and beyond (Santo, 2021, unpublished data). However, the Draft Environmental Impact Statement process was halted in July 2020, reportedly due to local concerns (US Department of the Interior, 2020). In November 2022, the agencies reinitiated the process and in April 2024 signed a Record of Decision indicating that they had decided to actively restore grizzly bears to the North Cascades of Washington. (US Department of the Interior, 2024). In light of these actions and the already-polarized nature of the discussion, we sought to characterize existing viewpoints on grizzly bear reintroduction to better understand underlying value positions and priorities that drive support or opposition to restoration.

3 | METHODS

We used Q-methodology to elicit stakeholder viewpoints on grizzly bear reintroduction in Washington. Q-methodology combines qualitative and quantitative methods to systematically structure viewpoints on a topic, regardless of how frequently those views occur in a population (Webler et al., 2009; Zabala et al., 2018). Q studies are not intended for generalization but rather to identify commonalities and differences among diverse value positions or belief systems (Sneegas, 2020; Sneegas et al., 2021). It is a particularly useful tool for contentious topics because it enables respondents to prioritize their standpoints by ranking statements that cover diverse, and at times seemingly unrelated, topics relative to each other (Zabala et al., 2018). This research was approved by the University of Michigan's Institutional Review Board which

determined that this study presented no more than minimal risk to participants and was exempt from on-going IRB oversight (ID: HUM00213420).

3.1 | Study design and data collection

The first step in Q-methodology is to develop a concourse of statements (i.e. from interviews, public comments, news articles or literature reviews: Sneegas et al., 2021) related to the topic of interest. To get a sense of the various narratives surrounding this issue and begin developing the concourse, we first reviewed newspaper articles and the Public Scoping Comment Summary (USNPS & USFWS, 2021), and held two informal interviews with agency staff who worked in public engagement throughout the scoping and open comment periods of the 2017 Draft Environmental Impact Statement. We then sampled statements from public comments about the Draft Environmental Impact Statement (USNPS & USFWS, 2021) received from commenters who reported living in zip codes that partially or completely overlapped with the proposed recovery area ($n=1712$) to develop the concourse, as has been done in other studies (e.g. Mazur & Asah, 2013; Peters & Ward, 2017). While selecting statements, we preliminarily sorted them into three broad categories to ensure balanced coverage of different considerations relevant to the central topic, and to help identify initial redundancies in statements. Those initial groupings were: perceptions of the science, perceptions of management, and other personal attitudes and opinions regarding reintroduction (e.g. fear of conflict, valuation of nature, etc.). We further grouped statements in these categories as favourable, opposed to, or neutral toward reintroduction. We stopped adding statements to the concourse once we reached thematic saturation (i.e. "additional data do not lead to any new emergent themes", Given, 2015, p. 135) at about 460 comment letters (about 27% of comments from people living in zip codes overlapping with the recovery area). This process resulted in 216 statements.

To narrow down this concourse to a set of representative statements (i.e. the Q set), we first regrouped the statements using Lee et al.'s (2021) 17 ethical arguments within the debate of grizzly bear reintroduction. Statements often covered multiple arguments, but the exercise was helpful to identify redundancies in statements making similar or overlapping arguments while retaining a diversity of standpoints. Some statements that did not fit well into any of these categories were retained as they were particularly relevant to the case study (e.g. #5, Table 3) or of potential interest to managing agencies who are actively evaluating reintroduction feasibility. For example, if the status of grizzly bears were to change under the Endangered Species Act [i.e. threatened, delisted, or listed as an experimental population under 10(j)], thus altering their legal protections and how they would be managed, would that influence people's attitudes toward reintroduction (#18 and #6, Table 1). Five members of the research team collaboratively and iteratively removed duplicative statements, grouped, selected, and re-grouped

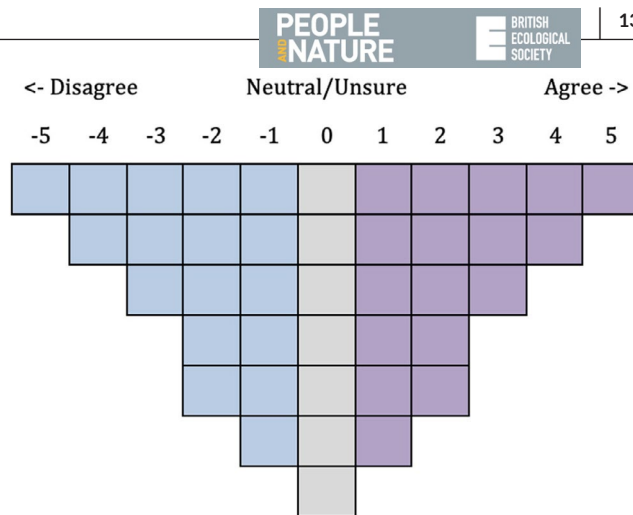
TABLE 1 Criteria used for determining how many factors to extract and rotate.

Number of factors	1	2	3	4	5	6
Eigenvalues	32.92	4.12	2.04	1.67	1.62	1.45
Humphrey's rule	0.78	0.38	0.15	0.11	0.17	0.13
% Explained variance	49	6	3	2	2	2
Cumulative % explained variance	49	55	58	61	63	65

statements to maximize a diversity of views while ensuring the sorting exercise would not be too time consuming for participants. The final Q set comprised 41 statements, which we edited for clarity and brevity (Table 3). We also reversed the meaning of some statements to achieve a more balanced set.

As is typical of Q-methodology, we used purposeful and snowball sampling to recruit respondents meant to represent a range of potential viewpoints on grizzly bear reintroduction (Watts & Stenner, 2012; Webler et al., 2009; Zabala et al., 2018). Based on the public commenters' group affiliations and agency knowledge of the region, we identified six stakeholder groups likely to hold knowledge of and strong opinions on grizzly reintroduction: (1) government agencies; (2) local farmers, ranchers and residents; (3) Indigenous government managers and members; (4) scientists and researchers; (5) environmental NGO-affiliates and advocates; and (6) recreationists. We then emailed members or representatives of these groups known to be involved in or to have commented on the 2017 Draft Environmental Impact Statement to invite their members to participate. We also asked group representatives if they had recommendations of other interested groups we should invite to participate. In total, we contacted 24 stakeholder groups in Washington and asked them to share the study with interested colleagues or group members, and 67 people participated in the study. Although some caution against having a greater number of participants than statements due to a potential loss of statistical power (Watts & Stenner, 2012; Webler et al., 2009), we strived to recruit respondents from each stakeholder group while not excluding potentially diverse perspectives from those groups which had a much higher uptake of interest in the study (e.g. recreationists). Additionally, we retained responses from five individuals located outside of Washington because of their affiliation with the Washington groups we contacted.

We conducted this study online using the program Q Method Software (<https://app.qmethodsoftware.com/>, Lutfallah & Buchanan, 2019) and collected data from May through July 2022. Respondents received a link to the study that allowed them to complete the exercise anonymously and on their own time. We first gave respondents an overview of the study's purpose, procedure, and eligibility to participate, and they were required to consent to participating before beginning the questionnaire. The study then started with a brief questionnaire that first asked respondents to select which stakeholder group they identified with the most regarding

**FIGURE 1** The grid used to sort statements based on relative agreement in this study.

their involvement or activities in the North Cascades as well as up to three additional stakeholder groups with which they identified. We also asked them to rank their familiarity with the 2017 Draft Environmental Impact Statement and collected some demographic information (full questionnaire available in Supporting Information).

After the questionnaire, respondents preliminarily sorted all 41 statements into three "piles" by giving each statement a thumbs up (indicating agreement with the statement), a thumbs down (indicating disagreement with the statement) or a question mark (indicating neutrality or feeling unsure about the statement). The software prompted participants to sort the statements onto a grid with a forced quasi-normal distribution, where the single statement placed into the +5 column was the statement the respondent most strongly agreed with, and the statement placed in the -5 column was the single statement with which they most disagreed (the Q sort, Figure 1). They sorted the rest of the statements accordingly based on strength of agreement or disagreement into the columns of the grid, with a limited number of statements allowed at the extreme ends and the majority forced into the center of the grid. In Q-method, respondents might agree with statements put into negative or neutral columns, and vice versa for statements they disagree with, if they agree or disagree with more than half of the statements. After sorting, respondents replied to open-ended prompts to elaborate on which statements they strongly agreed with, or strongly disagreed with, and why they (dis)agreed with them. This allowed respondents to express thoughts and ideas that may have been outside of the Q set statements and helped us to understand their perspectives as a whole.

3.2 | Analysis

We analysed the Q sorts using Q Method Software (Lutfallah & Buchanan, 2019). We generated a Pearson correlation matrix of every Q sort and used the matrices to conduct a centroid factor analysis. There is no one standard statistical rule for how many factors to keep in Q studies and based on the Kaiser-Guttman criteria

(Eigenvalues >1 , Guttman, 1954) and Humphrey's rule (where the cross product of the two highest loadings is greater than two times the standard error, Brown, 1980), a six factor solution was plausible (Watts & Stenner, 2012). However, a scree test of these factors and the variance explained by each indicated little additional variance is explained after Factor 2 ($<5\%$ per each additional factor).

We therefore used a combination of judgmental hand rotation and Varimax rotation to explore Q sort loadings relative to two, three, and four extracted factors (Watts & Stenner, 2012). We aimed to maximize the number of significant loadings in total and per factor while minimizing correlation between factors to ease interpretation (Webler et al., 2009). We found that all the Q sorts could be loaded significantly ($p < 0.05$) on just two factors, with the first factor being bipolar. We expected to find some degree of polarity given the contentious nature of this topic, and we were specifically interested in the perspectives that characterize viewpoints held outside of these two poles. Thus, we extracted two factors and used judgmental hand rotation to elicit three distinct viewpoints (Watts & Stenner, 2012).

These factors represented three viewpoints. We used crib sheets (Watts & Stenner, 2012) to explore and interpret factor meanings, first by looking at which statements were ranked highest and lowest by each group, then examining the distinguishing statements that were ranked higher or lower than for the other two groups. We used the open-ended responses paired with each Q sort to further explore the issues most salient to our respondents and triangulate our interpretation of the viewpoints (Watts & Stenner, 2012).

4 | RESULTS

The majority of our 67 respondents identified as women and recreationists. However, all of our stakeholder groups of interest were represented by at least one respondent's primary and secondary roles, with a diversity of loadings among respondents from the largest groups (i.e. recreationists, local residents, and environmental advocates; Table 2). We extracted two factors that cumulatively explained 55% of the variance and 49% was explained by Factor 1 alone (Table 1). All 67 Q sorts loaded significantly onto one of the two extracted factors (Figure 2), corresponding to three distinct viewpoints regarding grizzly bear reintroduction: (1a) reintroducing bears is a moral requisite; (1b) reintroducing bears is inappropriate and risky, and (2) reintroducing bears is impractical and not sensible. We describe each of these viewpoints below, summarizing how they are distinguished from each other using statement rankings (Table 3) and the open-ended responses, with corresponding statement numbers (#) and supporting quotes from respondents provided in parentheses.

4.1 | Factor 1a, the 'supportive' viewpoint: Reintroducing bears is a moral requisite

The majority of Q sorts significantly loaded onto Factor 1a ($n = 50$) and included at least one respondent from each of the

self-identified stakeholder groups, respondents from the east and west sides of the Cascades, as well as respondents with varying degrees of familiarity with the 2017 Draft Environmental Impact Statement (Table 2; Figure 3). This group was generally supportive of bear reintroduction on various moral grounds. This viewpoint strongly agreed that: we have a moral and ethical obligation to restore grizzly bears (#12, +4), supporting Tribes' and First Nations' cultural values and treaty rights is important (#41, +4; 'Indigenous peoples should be at the forefront of decision-making regarding the NCE'), and that they want to pass down a wild landscape that includes all native species, including the grizzly bear (#13, +5; 'I have a deep-rooted desire to restore and preserve the natural world for my child and future generations'). This viewpoint, as opposed to the other two, generally agreed that grizzly bears are ecologically and culturally important components of the ecosystem (#11, +3; #38, +2; #8, +2; #7, +2; 'Apex predators like bears are every important to the health of our forests') and that we should assist their recovery in all areas that are still habitable (#40, +3; 'There are limited opportunities in the world where there is enough space and habitat to support a full compliment [sic] of native carnivores. We must take advantage of the limited opportunities we do have'). This viewpoint also agrees that the fear of grizzly bears is overblown (#35, +1; 'Too much of the general public's fears are based on myth rather than accurate, clear scientific data') and that people will learn to coexist with them (#10, +2; 'There are proven methods of mitigating risks to hikers, bikes, campers, livestock, hunters, etc').

The supportive viewpoint strongly disagrees that the reintroduction of grizzly bears would threaten their ways of life (#23, -5), and that reintroducing bears would be another tool to keep people out of wilderness (#14, -4; 'I don't view this as a way to restrict people. The PNW prides itself on its outdoor recreation options, it would be ridiculous to assume they would do something to intentionally harm that'), and that the risk of economic losses outweighs the value of having wild predators (#15, -4; 'It's ridiculous to value economic gain over natural resources at any cost. The economy isn't going to pollinate food crops or provide us with water —nature does that'). This viewpoint generally rejects the idea that reintroducing grizzly bears would negatively impact livelihoods, land management, hunting or recreation (#30, -1; #3, -1; #1, -2; #25, -3; 'I disagree that reintroduction would be damaging to livelihoods and recreation, quite the opposite.'). They also disagree that reintroduction would constitute unacceptable levels of risk to people (#31, -1; #29, -2; #28, -2; '...wilderness carries risk and that those who choose to use it (for work, residence, recreation or whatever) need to take responsibility and be prepared') or to the translocated bears (#26, -3; #24, -3; 'There is minimal chance that grizzlies will get used to humans and get into trouble because of this'). This group also disagreed with the notion that agencies did not care about people living near proposed reintroduction areas (#27, -2; 'I also believe that the agencies who would reintroduce them would help people learn how to coexist with them').

TABLE 2 Respondent characteristics and factor loadings. Respondents were able to select multiple secondary roles.

Primary roles	Factor 1a "supportive" (N = 50)	Factor 1b "opposing" (N = 8)	Factor 2 "pragmatic" (N = 9)	Total (N = 67)
Recreationist	39	5	9	53
Local resident/landowner	2	3	0	5
Environmental advocate	4	0	0	4
Scientist/researcher	3	0	0	3
Government agency	2	0	0	2
Secondary roles	N	N	N	N
Environmental advocate	22	2	3	27
Local resident/landowner	8	3	0	11
Recreationist	9	2	0	11
Scientist/researcher	6	0	0	8
Hunter/angler	5	1	1	7
Government agency	2	0	0	2
Local rancher	1	0	0	1
Tribe member	0	1	0	1
Familiarity with 2017 draft environmental impact statement	N	N	N	N
Not at all familiar	15	0	3	19
Somewhat familiar	25	8	5	38
Very familiar	9	0	1	10
Gender	N	N	N	N
Woman	38	6	6	50
Man	11	2	3	16
Gender expansive	1	0	0	1
Age ranges (years)	N	N	N	N
21–30	9	1	1	11
31–40	17	3	4	24
41–50	11	0	2	13
51–60	8	1	0	9
61–70	4	3	1	8
71–80	1	0	1	2

Several additional topics were covered in respondents' open-ended responses that were not distinctly tied to the distinguishing statements that characterized this viewpoint. For example, respondents indicated that grizzly bear recovery was an opportunity to express an ethic of care ("It should be our goal to be nature's stewards to protect the natural world and minimize our impact"). Others mentioned the government's legal responsibility to recover bears ('recovering at-risk species is the responsibility and mandate of the conservation agencies') and animal rights arguments ('All native species have a right to exist in sustainable numbers on our landscapes irrespective of human values'). Two expressed opposing opinions about whether or not the agencies have sufficient resources and capacity to manage this project ('I do worry that this will potentially be another program that struggles

for funding/resources'; 'I agree with the fact that agencies need more resources, I don't see this [lack of resources] as a major barrier to a successful restoration program').

4.2 | Factor 1b, the 'opposing' viewpoint: Reintroducing bears is inappropriate and risky

Eight sorts loaded significantly onto Factor 1b and included people who primarily identified as local residents and recreationists (Table 2). These respondents all said they were somewhat familiar with the 2017 Draft Environmental Impact Statement. This viewpoint essentially represents the polar opposite of 1a and is distinguished by statements that are generally negative toward



FIGURE 2 Q sort positions relative to two extracted factors following judgmental rotation (-10°). Red dots and numbers show individual Q sorts that significantly load onto Factor 1. The two clusters of red dots represent Q sorts that loaded positively and negatively onto Factor 1, representing essentially opposing viewpoints. Yellow dots and numbers show individual Q sorts that significantly load onto Factor 2. Loadings were considered significant at $p < 0.05$. See Table S1 for exact factor loadings of each participant.

grizzly bear reintroduction. Thus, we refer to this viewpoint as the “opposing” viewpoint. This viewpoint strongly agrees that there are too many people, too few resources, and inadequate habitat for grizzly bears (#26, +4) that they would not be able to relax and recreate in the North Cascades with grizzly bears (#25, +4), and that it would be unethical to reintroduce bears (#24, +5). Generally, this perspective views grizzly reintroduction as an unacceptable risk to their livelihoods (#30, +3; #29, +3; #28, +2; #15, +2; #23, +3; “This would be detrimental to WA’s tourism income, not to mention for the locals, especially those with crops or livestock”). Further, this viewpoint agrees that there were not meaningful opportunities for public input and feels like agencies do not care about locals, and that reintroduction would be used as a tool to keep people out of wilderness (#16, +2; #1, +1, #14, +1).

The opposing viewpoint strongly disagrees that we have a moral and ethical obligation to restore grizzly bears (#12, -5), and strongly disagrees that restoring grizzly bears is the conservation ethic that the United States should be demonstrating (#9, -4). Holders of this viewpoint were not accepting of short-term restrictions to wilderness access to prevent human-bear conflicts (#39, -4). This viewpoint also disagrees that fear of grizzly bears is overblown (#35, -3; ‘One attack is too many’, ‘I personally will not backpack in areas where grizzlies are present because it is too dangerous’). They disagree that grizzly bears play important

ecological roles in seed and nutrient dispersal and prey control (#38, -3; ‘There is not sufficient reliable data to support, or predict the benefits of, ... such a program, The ecosystem is functioning fine with just black bears’). This viewpoint does not see the risk of livestock loss as something ranchers must accept (#40, -2), and does not think that the cultural values or treaty rights of Tribes and First Nations are important considerations (#41, -1). Other salient topics that seem to characterize this viewpoint include the (un)necessity of reintroduction and the lack of its benefits (‘I see no major benefit to society by introducing dangerous predators into areas that now have relatively high human populations’, ‘If grizzlies make their way back into areas naturally, then so be it. But it seems unnecessary and foolish to intentionally reintroduce grizzlies to an area’).

4.3 | Factor 2, the ‘pragmatic’ viewpoint: Reintroducing bears is impractical and not sensible

Nine sorts loaded significantly onto Factor 2, and all of these respondents identified primarily as recreationists with varying levels of familiarity with the 2017 Draft Environmental Impact Statement (Table 2). This viewpoint strongly agrees that there are not enough committed resources to manage a grizzly bear reintroduction (#33, +4; ‘I question if the resources are there to adequately manage this effectively’) and that agencies should focus their efforts and funding on the conservation of other declining wildlife populations (#32, +5; ‘I’d like to see funding and resources go to better managing the current wildlife and flora in the North Cascades before grizzlies are brought into the equation’). One respondent further clarified that “it’s not impossible to cohabitate on some level. We see this done throughout Canada daily. However, this adaptation to coexistence does not happen quickly nor is it without consequences to both wildlife and human life and livelihood.” Holders of this viewpoint were also strongly concerned that bears reintroduced to the North Cascades would lose their fear of people and become more dangerous (#31, +4). Generally, this viewpoint also ranks statements concerning public choice, management plans, and prioritizing ecological need (#36, +3; #34, +3; #19, +3) higher than the other two groups but also agrees that livestock predation is a risk that ranchers must accept when grazing on public lands (#37, +2).

Like with Factor 1b, the pragmatic viewpoint disagrees that there is a moral and ethical obligation to restore grizzly bears (#12, -4) and disagrees that it is the conservation ethic America should be demonstrating (#9, -5; ‘Human intervention is manipulation... Let nature take its course and respect it’). This viewpoint also disagrees that the only way to restore bears would be through translocation (#5, -3; “they DO NOT need to be reintroduced by human intervention. If grizzly bears naturally return to a habitat, that’s OK”). However, this viewpoint does not believe that reintroducing bears is a tool to keep people out of wilderness (#14, -4) and disagrees that the risk of economic losses outweighs the value of having natural carnivores in the ecosystem (#15, -2). Finally, greater management flexibility

TABLE 3 Statements sorted by study participants and their corresponding z-scores and ranks by each factor.

Statement	z-Scores			Rankings			Factor of distinguishing statement
	1a	1b	2	1a	1b	2	
1. Grizzly bear reintroductions will negatively impact hunting opportunities	-1.05	0.4	-0.03	-2	1	0	Supportive viewpoint (1a)
2. Other grizzly populations are abundant enough to prevent the species from going extinct, so we do not need to reintroduce them to the NCE	-0.93	1.1	1.15	-2	2	2	Supportive viewpoint (1a)
3. Grizzly bear reintroductions and presence will hinder other critical land management activities such as fire prevention and road and trail maintenance	-0.93	0.73	1.03	-1	1	2	Supportive viewpoint (1a)
4. The recovery of grizzly bears in the US since they were listed under the Endangered Species Act has become one of the greatest US conservation success stories	0.21	-0.87	-0.66	0	-1	-1	Supportive viewpoint (1a)
5. The only way to restore the grizzly bear population in the NCE is to translocate bears from other populations	0.22	-0.92	-1.15	1	-1	-3	Supportive viewpoint (1a)
6. The status of grizzly bears in the NCE under the Endangered Species Act (i.e. federally threatened, experimental population, or delisted) influences my opinion about reintroduction	0.34	-0.51	-0.7	1	-1	-2	Supportive viewpoint (1a)
7. Grizzly bears are an iconic symbol of American wilderness	1.01	-1.09	-0.65	2	-2	-1	Supportive viewpoint (1a)
8. The main focus of the agencies must be on the health of the ecosystem	1.10	-0.31	-0.13	2	-1	0	Supportive viewpoint (1a)
9. Restoring grizzly bears to the NCE is the conservation ethic that America should be demonstrating	1.15	-1.38	-1.57	2*	-4	-5	Supportive viewpoint (1a)
10. People will learn to recreate and coexist safely with bears in the NCE given proper education and tools	1.22	-1.36	-1.12	2	-3	-3	Supportive viewpoint (1a)
11. Wherever grizzly bears thrive, so does wildness, clean water and abundant fish and wildlife	1.22	-1.08	-0.89	3	-2	-2	Supportive viewpoint (1a)
12. We have a moral and ethical obligation to restore grizzly bears and other native species that we have wiped out in past generations	1.56	-1.81	-1.51	4	-5	-4	Supportive viewpoint (1a)
13. I want to pass down a wild landscape that includes all native species, including the grizzly bear	1.60	-0.99	-0.96	5	-2	-2	Supportive viewpoint (1a)
14. I believe that reintroducing grizzly bears to the NCE would simply be another tool to try and keep people out of the wilderness	-1.63	0.56	-1.48	-4	1	-4	Oppositional viewpoint (1b)
15. The risk of economic losses or damage to property outweighs the value of having wild predators in the ecosystem	-1.28	0.92	-1.01	-4	2	-2	Oppositional viewpoint (1b)
16. Public meetings are just a requirement for agencies and do not allow for meaningful input and discussion	-0.58	0.85	-0.46	-1	2*	-1	Oppositional viewpoint (1b)
17. The potential stress to individual bears during the translocation process is more important to me than establishing a new grizzly bear population in the NCE	-0.41	0.30	-0.49	-1	0*	-1	Oppositional viewpoint (1b)

(Continues)

TABLE 3 (Continued)

Statement	z-Scores			Rankings			Factor of distinguishing statement
	1a	1b	2	1a	1b	2	
18. I would support grizzly bear reintroduction only if there is more management flexibility to deal with bears [i.e. if NCE grizzlies are designated as a "nonessential, experimental population" under 10(j)]	-0.47	-0.47	-1.13	-1	-1	-3	Pragmatic viewpoint (2)
19. The reintroduction of formerly native wildlife should be prioritized only if there is a demonstrable, ecological need	-0.26	0.05	1.23	0	0	3	Pragmatic viewpoint (2)
20. Tourism is an important consideration for reintroducing grizzly bears to the NCE	-0.31	-0.31	0.03	0	0	1	Consensus statement
21. The key to successful grizzly bear restoration lies in giving local citizens a larger and more meaningful role in bear management	0.16	0.14	0.33	0	0	1	Consensus statement
22. Loss of crops to wildlife is an inherent challenge when farming near wilderness areas	0.54	0.25	0.5	1	0	1	Consensus statement
23. The reintroduction of grizzly bears to the NCE would threaten my way of life	-1.84	1.38	-0.21	-5	3	0	None
24. It would be unethical to reintroduce grizzly bears to the NCE because they may come into conflict with people and need to be heavily managed	-1.14	1.8	0.85	-3	5	2	None
25. I would not be able to relax and recreate in the North Cascades wilderness if grizzly bears returned to the ecosystem	-1.12	1.43	0.86	-3	4	2	None
26. There are too many people, too few food resources, and inadequate habitat in the NCE for grizzly bears to be compatible with our society today	-1.06	1.41	0.52	-3	4	1	None
27. I feel like agencies do not care about the people living near proposed grizzly reintroduction areas	-1.05	0.77	-0.01	-2	1	0	None
28. Any risk to human life is unacceptable	-0.94	1.1	0.1	-2	2	1	None
29. I should not have to fear for my safety from wildlife while working or recreating on my own land	-0.94	1.16	-0.17	-2	3	0	None
30. Grizzly bear reintroductions will negatively impact natural resource-based livelihoods	-0.91	1.13	-0.06	-1	3	0	None
31. I am concerned that grizzly bears reintroduced to the NCE would become used to human interaction and eventually lose their fear of people, making them more dangerous	-0.44	0.54	1.57	-1	1	4	None
32. Agencies should focus their efforts and funding on the conservation of existing wildlife populations that are declining before reintroducing grizzly bears	-0.36	0.94	2.47	0	2	5	None
33. There are not enough committed resources for the agencies to adequately manage a grizzly bear reintroduction	-0.24	0.27	1.83	0	0	4	None
34. People should have a choice on whether grizzly bears are to be reintroduced in the NCE	-0.07	0.61	1.57	0	1	3	None
35. Fears of grizzly attacks on livestock and people are overblown	0.67	-1.09	-0.55	1	-3	-1	None

TABLE 3 (Continued)

Statement	z-Scores			Rankings			Factor of distinguishing statement
	1a	1b	2	1a	1b	2	
36. A thorough management plan for dealing with conflicts between grizzly bears, livestock, and people must be in place before reintroductions occur	0.8	-0.07	1.41	1	0	3	None
37. Loss of livestock to predators is a risk ranchers must accept when grazing on public lands	0.97	-0.92	0.59	1	-2	2	None
38. Grizzly bears play important roles in seed and nutrient dispersal and in maintaining healthy prey populations	1.21	-1.17	-0.23	2	-3	0	None
39. I would be okay with short-term restrictions to wilderness access due to grizzly bear reintroductions or presence, when necessary, to prevent human-bear conflicts	1.23	-1.78	-1.01	3	-4	-2	None
40. It is imperative that we help grizzlies flourish in areas of their native range that are still habitable for them	1.29	-1.06	-0.43	3	-2	-1	None
41. Supporting Tribes' and First Nations' cultural values and their treaty rights regarding grizzly bears is an important consideration for reintroduction	1.47	-0.66	0.58	4	-1	1	None

Note: White rows are consensus statements (i.e. ranked similarly by each factor). Grey rows indicate that each factor ranked that statement differently than the other two. Dark red rows indicate distinguishing statements (i.e. statements ranked significantly different by one factor than the other two) for Factor 1a, the supportive viewpoint. Light red rows indicate distinguishing statements for Factor 1b, the opposing viewpoint, and yellow rows indicate distinguishing statements for Factor 2, the pragmatic viewpoint.

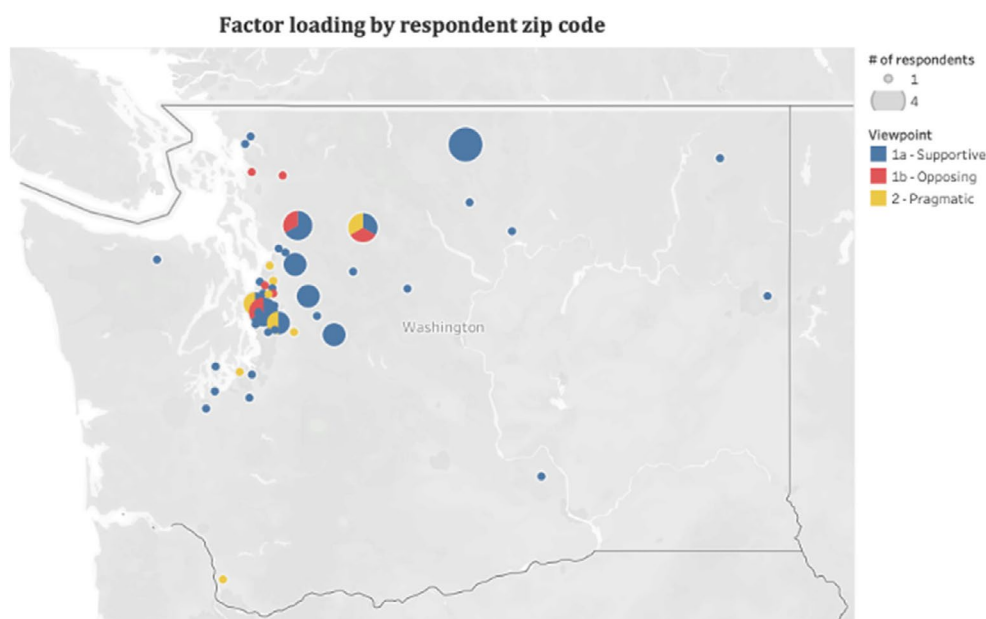


FIGURE 3 Map of factor loadings by each respondents' zip code. Dots are placed in the centre of each zip code area. Five respondents listed zip codes outside of Washington: One in Alaska, two in Oregon, one in California and one in Montana. The California respondent loaded onto Factor 1b, all the others loaded onto Factor 1a. Factor loadings should not be generalized to wider spatial extents; this is only meant to show our individual respondents' distribution in comparison to each other.

(through designating the North Cascades population of translocated bears as an “experimental population” under section 10(j) of the Endangered Species Act, which would ease the prohibitions and consultations needed for species listed under the Act and allow for legal or incidental removal of bears that come into conflict with people, USFWS, 2018) would not garner greater support from holders of the pragmatic viewpoint (#18, -3).

4.4 | Consensus views

Three statements were ranked neutrally (0) to slightly positively (+1) among all three groups: that the key to restoration lies in giving locals a meaningful role in management (#21), that tourism is an important consideration (#20), and that the loss of crops is an inherent challenge (#22). Q-method's forced distribution process describes the mode or central values as the ‘neutral’ condition; however, respondents may not necessarily feel neutrally about these statements. For example, readers who agree with most statements would be forced to rank some statements they agree with in the neutral or even slightly negative positions, and vice versa. However, they rank statements they feel most strongly about at the poles of the distribution. The only three consensus statements among all three viewpoints were in these central positions. A few respondents did speak to them specifically: ‘I am very much in favor of giving First Nations and Native American tribes, as well as local populations, a say in how the areas that are important to them are managed’ (Viewpoint 1a); ‘This would be detrimental to WA's tourism income, not to mention for the locals, especially those with crops or livestock’ (Viewpoint 1b); ‘The tourists/recreational people don't seem to learn. They end up creating the biggest issue when looking at compatibility’ (Viewpoint 2).

5 | DISCUSSION

We found and characterized three distinct viewpoints on grizzly bear reintroduction in the North Cascades Ecosystem of Washington state. Our analysis of these viewpoints, the relative importance and grouping of different statements, and our observation of divergence in perspectives of people identifying with the same interest groups (i.e. recreationists and local residents) led to four key insights applicable to understanding and evaluating the social acceptability of this and other large carnivore restoration efforts. First, latent and multifaceted viewpoints exist outside of the polarized for-or-against debates, and these may be overshadowed in emotionally charged public discourses. Second, individuals integrate instrumental, intrinsic, and relational values when assessing reintroduction proposals (Box 1). Third, varied perceptions of risk relate to the perceived social acceptability of proposed reintroductions. Fourth, divergent viewpoints within our identity groups with the most respondents (e.g. recreationists and local residents) challenge commonly held assumptions about how identities correspond to viewpoints. We discuss each insight in the subsections below.

This study answers calls to forefront social and political dimensions in weighing the merits and successes of carnivore reintroductions (e.g. Booth, 1988; Wilson, 2018), and to dig deeper into the complexities and context-specific nature of conflicting viewpoints (Glikman et al., 2022). Our approach and findings differ from much of the large carnivore recovery literature, which typically treats peoples' interests as reducible to either instrumental—often material—values (e.g. Bautista et al., 2019; Dickman et al., 2011; Lamar et al., 2024) or deeply held wildlife value orientations (e.g. Hermann et al., 2013; Landon et al., 2019; Lopes-Fernandes & Frazão-Moreira, 2017) and tends to focus on characterizing the most extreme perspectives about coexisting with large carnivores. This paper shows that many peoples' relational, instrumental, and intrinsic values interweave in nuanced ways that have relevance for conservation decisions beyond these typical values characterizations. Other studies on the successes and failures of already-implemented carnivore restoration or rewilding highlight the shortcomings of stakeholder engagement and understanding, and how these views can be amenable to different outreach approaches or particularly impactful events (Diserens et al., 2020; Kaczensky et al., 2011; Nesbitt et al., 2023; Tosi et al., 2015; Zamboni et al., 2017). Better understanding how different values commingle and bundle (e.g. Klain et al., 2017) will enable more nuanced engagement strategies for complex conservation topics.

5.1 | Latent views in a polarized debate

News coverage and heated public rhetoric about the proposed reintroduction of grizzly bears to the North Cascades might suggest that it is a politically polarizing and emotional topic for users of the ecosystem; however, our study illuminates a variety of drivers or justifications for support or opposition, including ones more related to what is sensible and pragmatic. Other Q studies on carnivore reintroduction and recovery have found similar latent and middle perspectives that are shaped more strongly by practical or other considerations (Bavin et al., 2020; Mattson et al., 2006; Mazur & Asah, 2013). Here, the pragmatic viewpoint (Factor 2) was more concerned with the actual capacity of agencies to manage such an endeavour and its overall practicality, especially in the face of many other conservation and management priorities, such as trail maintenance or the recovery of threatened species still extant in the ecosystem (#32, +5; #3, +2; Table 3). At the same time, this perspective did not necessarily indicate strong feelings of support or opposition to the restoration of bears itself. Holders of these less extreme viewpoints may be most open and flexible to different management options, provided that the costs and benefits of those options are appropriately understood and addressed (Hiroyasu et al., 2019; Lehrer & Sneegas, 2018; Mazur & Asah, 2013). Identifying and attending to diverse and latent perspectives may be difficult in contentious public discourses, but is nonetheless critical for building trust and equity, which allows for collaborative planning and can prevent inadvertently overlooking the concerns of affected groups

(Bruskotter & Shelby, 2010; Consorte-McCrea et al., 2022; Madden & McQuinn, 2014).

5.2 | Integrated values in opinions on reintroduction

Deeply relational notions about moral and ethical obligations to other people and nonhuman species characterized the bipolarity of the supportive (1a) and opposing (1b) viewpoints, which 58 of our 67 respondents aligned with. The relational values concept has been discussed and applied in multiple ways, but two conceptualizations we draw on here are that: (1) relational values are values that are relational *in content* (i.e. a relationship *itself* matters, more than as a means to an instrumental outcome), and (2) relational values can be held values (e.g. Rokeach, 1973) as applied to a thing or things (Chan et al., 2016, 2018; Himes & Muraca, 2018). The supportive (1a) and opposing (1b) viewpoints diverged strongly in the “other(s)” that were the focus of their value expressions. The supportive viewpoint (1a) identified with statements that expressed strong notions of responsibilities toward grizzly bears (#12, +4; #40, +3), Tribes and First Nations (#41, +4), future generations (#13, +5), and the ecosystem (#11, +3; #38, +2; #8, +2), whereas respondents who aligned with the opposing viewpoint (1b) identified much more strongly with statements about responsibilities and obligations toward people who use and recreate in the North Cascades Ecosystem (e.g. #16, +2; #29, +3; #25, +4; #24, +5; #15, +2; #23, +3). These viewpoints and their prioritized statements also differed somewhat in the content of the value expression, with the supportive viewpoint more commonly aligning with notions of *responsibility* and *obligation* (e.g. #12, +4) to bears, future generations, Indigenous peoples, and humanity and nature. The opposing viewpoint more commonly conjured notions of [a lack of] *mutual benefit* (#15, +2) for bears and people, *independence* of and *accountability* to those currently occupying the landscape (#39, -4; #8, -1; #27, +1), and *social order* and *safety* (#28, +2) (Schwartz, 1992). This suggests that most respondents' viewpoints were underpinned by diverging notions of appropriate relationships with others.

Our findings point to the important role relational values play in the polarizing debate of grizzly bear recovery, and how different value framings in outreach messaging might resonate with stakeholders. People may ascribe intrinsic value to nature and derive instrumental and relational value from human-nature relationships (Himes & Muraca, 2018), but conservation discourses often focus on a false intrinsic/instrumental dichotomy (Piccolo, 2017). Intrinsic value frames likely will not motivate or resonate with most stakeholders' viewpoints (Klain et al., 2017). Instrumental-value frames may only be effective when the alleged instrumental effects of a reintroduction are salient, demonstrable and widely accepted as credible to diverse publics. These are difficult criteria when scientific conclusions about anticipated outcomes of carnivore reintroduction are uncertain and may also be selectively heard, taken up, or recalled

(Douglas & Wildavsky, 1983; Kahan et al., 2011). Our study suggests that many people interpret the proposed grizzly bear reintroduction using primarily relational, rather than intrinsic or instrumental, value frames (e.g. Himes & Muraca, 2018, Box 1). Approaching apex carnivore reintroduction planning through relational value frames and developing public engagement strategies that use relational approaches (e.g. by anchoring proposals to restore apex carnivore populations in the context of relationships people already care about) may better align with the ways people intuitively make judgements about what is appropriate, or right, in a given situation (Himes & Muraca, 2018; Klain et al., 2017; March, 1994).

5.3 | Varying perceptions of risk

Perceptions of how risky it might be, and to whom, to reintroduce grizzly bears also characterized divergent viewpoints. Perceptions of riskiness can be broadly conceived as constituting perceptions of hazardousness of, exposure to, and vulnerability when confronted with a risk (Böhm & Tanner, 2018). The three viewpoints identified here weighed and prioritized risk differently. For example, risks to physical safety and to their ability to use and recreate on the landscape without fear were of high concern to the opposing viewpoint (Factor 1b, e.g. #29, +3), while the pragmatic viewpoint (Factor 2) was concerned with the fiscal condition of the agencies and their capacity to handle this and other priorities (#33, +4; #32, +5). Carnivore reintroductions do pose real risks to human and non-human actors that should be addressed, although some risks (e.g. physical harm) are less likely than others (e.g. experiencing fear, lifestyle changes). Further, in the case of the North Cascades where some people or communities may not have interacted with grizzly bears for many decades or ever, people may have limited historical memory or previous interaction with grizzly bears, and primarily heard stories about the danger(s) they pose. Perceiving a hazard as “dreadful” or “unknown” can heighten individual perceptions of riskiness (Slovic, 1987). These individual perceptions are a function of interacting affective, cognitive (i.e. heuristics and biases) (Gilovich et al., 2002), and sociocultural processes (e.g. historical memory, group membership and norms, power and agency, trust dynamics) (Bickerstaff, 2004; Bickerstaff et al., 2008; Bickerstaff & Simmons, 2009; Douglas & Wildavsky, 1983; Johnson, 1999; Peters & Slovic, 1996). Dismissing or downplaying these dimensions of risk perceptions or dismissing the importance of peoples' experiences of living in fear (even when attack probabilities are low) can be a form of injustice that harms people (McInturff et al., 2021) and may lead reintroduction efforts to fail (Hintz, 2007).

Reintroduction efforts may gain greater acceptability when they help orient and prepare people to manage and mitigate risk and understand the benefits of grizzly bear reintroduction. One specific effort intended to mitigate risks associated with grizzly bear recovery is to classify North Cascades bears as a nonessential “Experimental Population” under the US Endangered Species Act's 10(j) rule. In short, a 10(j) designation affords the US Fish and Wildlife Service

the discretion and flexibility to manage and design regulations specific to the reintroduced populations by, for example, allowing the legal or incidental removal of animals that come into conflict with people (USFWS, 2018). Agency managers view this as a way to reduce risk perceptions and achieve buy-in from the hesitant public; this policy helped to reduce some of the opposition to wolf reintroductions in Yellowstone National Park (Smith & Peterson, 2021), and has been used in recovery efforts for multiple species listed under the Endangered Species Act, such as the Rio Grande silvery minnow, whooping crane, Oregon silverspot butterfly and grey wolves (USFWS, 2018). However, this strategy did not appear to drive perspectives on reintroduction in our three viewpoints (#18, ranked -1, -1, -3). It could be that our respondents did not understand what this policy would mean or that they had not heard of this option before. Their rankings could also indicate that they support or oppose or have concerns with reintroduction regardless of legal definitions or how bears would be managed. Alternatively, our respondents may be viewing the policy as less of a tool to reduce human-bear conflict and more of a risk to the bears by relaxing Endangered Species Act protections, or a risk to the purity of wilderness by allowing human intervention through translocation. Both were the case with wolves (Phillips, 2017; Smith & Peterson, 2021) and are plausible in this case as well.

Regardless, agencies should work to ensure that the risks and benefits of such measures are clearly explained and well understood if they are to mitigate conflicts and concerns. Additionally, previous research has demonstrated that focusing too much on risks rather than benefits can inflate risk perceptions and lead to intolerance (Slagle et al., 2013). Many scholars have suggested that it is important to emphasize the ecosystem and cultural service benefits of carnivore reintroductions in addition to the risks (Bruskotter & Wilson, 2014; Slagle et al., 2013), though the practice of emphasizing benefits is relatively uncommon (Lozano et al., 2019; Rode et al., 2021). Social acceptability may therefore be a balance of helping people to become aware of actual risks, enabling them to feel like they can handle those risks, without stressing that they ever will need to (Slovic, 1987), and understanding the benefits they and others may experience.

5.4 | Blurring identity politics

Our study challenges the assumption that broad stakeholder groups would have similar beliefs and thus attitudes about grizzly bear reintroduction. Theories such as cultural cognition theories (Kahan et al., 2007, 2011) and values-belief-norm theory (Stern et al., 1999) suggest that stakeholder groups might be likely to share identities, values and beliefs about grizzly bear reintroduction, and that viewpoints between groups would differ. However, we found that the primary and secondary roles which had the largest number of respondents—recreationists, local landowners/residents and environmental advocates—had internally diverging viewpoints (Table 2). Our analysis also did not find a clear division between

urban and rural communities (or in our specific case, east/west of the Cascades) which is often assumed to drive conservation debates (Kellert, 1994; Nie, 2001; Robbins, 2006). Additionally, a lack of diversity in the viewpoints of other identity groups (i.e. government agency employees and scientists/researchers, Table 2) may be attributed to a fewer number of participants from those groups.

Our stakeholder groupings are simplistic but still highlight the need to move beyond assumptions about how people with particular identities will feel about reintroducing grizzly bears or other large carnivore recovery projects (Heneghan & Morse, 2018; Hughes & Nielsen, 2019; Nesbitt et al., 2023). Such assumptions can drive further polarization between stakeholder groups and turn constructive conflicts into pathological ones that result in gridlocks (Harrison & Loring, 2020; Madden & McQuinn, 2014). To successfully balance agencies' legal mandates of grizzly bear recovery and other responsibilities to the public, it will be crucial to facilitate open and honest conversations; build trust, tolerance, and understanding between stakeholder groups; and share knowledge in ways that create space for diverse perspectives to be heard, deliberated, and addressed (Consorte-McCrea et al., 2022; Hiroyasu et al., 2019; Hughes & Nielsen, 2019; Lafon et al., 2004; Lorimer et al., 2015; Nesbitt et al., 2023). It was interesting, however, that the statement regarding the importance of local involvement in management (#21, ranked 0, 0, and +1) was not rated higher as a consensus statement given the literature advocating for co-management and knowledge exchange among local communities and government agencies (Hughes & Nielsen, 2019; Richardson, 2022; Wilson et al., 2014). This could be due to the fact that the Q sort in this study forced respondents to sort statements into a triangle distribution, which means they must choose which statements (perhaps among many they agree with) to privilege in this particular context. It may also be due to the nature of the current debate which is more centred on if and how to restore bears, rather than negotiating management and control of an existing population. If so, this presents an opportunity to prevent 'pathological conflicts' that result in management gridlocks (Harrison & Loring, 2020). The Q sort also forced participants to identify statements that they felt less strongly about, which in our study may point toward discussion topics on which individuals or interest groups with diverse identities may be able to reach agreement, and thus build the positive interpersonal interactions and necessary trust to discuss more controversial topics (Davis et al., 2018).

5.5 | Limitations and other considerations

It is likely that additional latent viewpoints exist beyond the three we have described here given our small sample size and limited response from particular stakeholder groups such as residents living on the east side of the North Cascades, farmers, ranchers, and Indigenous peoples. Additionally, Q-methodology is subject to researcher bias in the selection and editing of statements as well as the source of the statements in the concourse (Robbins & Krueger, 2000). Our

statements come from public comments, which themselves are heavily influenced by the messaging of various advocacy groups. Thus, other perspectives likely exist on this topic that merit consideration. Viewpoints rooted in Indigenous worldviews, in particular, are likely missing from this study. Indigenous worldviews are widely varied and rooted in deeply different knowledge systems, processes of information gathering and transfer, and ways of life as compared to western worldviews (Atleo, 2007; Gould et al., 2019; Wilson, 2008). Viewpoints on land and species management rooted in these ways of knowing (e.g. Ban et al., 2018; Bhattacharyya & Larson, 2014; Rayne et al., 2020) likely diverge from our Western respondents' viewpoints. Co-imagining and co-leading reintroduction efforts with Indigenous peoples' whose traditional lands have been or will be transformed by the presence or absence of a species would benefit reintroduction efforts and community relations (Rayne et al., 2020).

6 | CONCLUSION

Apex carnivore reintroductions are one valuable tool to restore ecological and cultural keystone species back onto the landscape, but their success depends heavily on processes that promote equity, inclusiveness, trust, and managers' ability to integrate the perspectives of multiple viewpoints. Our use of Q-methodology elicited latent perspectives and challenged assumptions about stakeholder viewpoints of the proposed reintroduction of grizzly bears to the North Cascades. These insights push this and other debates on apex carnivore reintroductions beyond siloed interests and contentious polarization. Further, our results are relevant to how managers communicate the risks and benefits of such an endeavour, encompassing relational values in addition to the instrumental or intrinsic value of bears or other carnivores. By making respondents prioritize the most important issues to them within a diversity of opinions and beliefs—independent from any pressures of public settings or their peers—researchers and managers can better understand and attend to the many ways individuals draw upon their values, perceptions of risk, and interactions with the ecosystem and each other to make judgements. In doing so, conservation professionals can acknowledge the legitimacy of each viewpoint, thereby allowing for greater participation and inclusivity in management actions, especially those with a reputation for being contentious.

AUTHOR CONTRIBUTIONS

Tara S. Easter conceived the ideas, designed methodology, and recruited and surveyed study participants. Anna R. Santo and Tara S. Easter co-led data analysis and the writing of the manuscript. Abigail H. Sage and Jason I. Ransom assisted with methodology design and writing of the manuscript. Neil H. Carter and Kai M. A. Chan assisted with writing and revising the manuscript. All authors contributed critically to the drafts and gave final approval for publication.

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CONFLICT OF INTEREST STATEMENT

A. H. Sage and J. I. Ransom are or were employed by the US Fish and Wildlife Service and US National Park Service, respectively, and were engaged at a technical level in drafting the current Draft Grizzly Bear Restoration Plan/Environmental Impact Statement for the North Cascades Ecosystem. Both A. H. Sage and J. I. Ransom also represent(ed) their agencies on the technical team of the Interagency Grizzly Bear Commission North Cascades Ecosystem Subcommittee. The findings and conclusions in this article are those of the authors and do not necessarily represent the views of US Fish and Wildlife Service or US National Park Service. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the US Government. K. M. A. Chan was a Lead Editor for People and Nature during the review period but was not involved in the peer review or decision-making process of the paper, and has since stepped down from the Editorial Board.

DATA AVAILABILITY STATEMENT

The data collected and analysed for this study is available on Data Dryad: DOI: [10.5061/dryad.73n5tb369](https://doi.org/10.5061/dryad.73n5tb369).

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

Appendix S1. Q study questionnaires.

Table S1. Factor loadings of each participant.

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