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The discourses of incidents: cougars on Mt. Elden and in Sabino Canyon, Arizona

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Abstract Incidents are relatively short periods of intensified discourse that arise from public responses to symbolically important actions by public officials, and an important part of the conflict that increasingly surrounds state wildlife management in the West. In an effort to better understand incidents as a facet of this conflict, we analyzed the discourses of two incidents in Arizona that were precipitated by the intended removal of cougars by managers in response to public safety concerns. We used newspaper content, 1999–2007, to elucidate seminal patterns of public discourses and discourse coalitions as well as differences in discursive focus between incident periods and background periods. Cougars were mentioned in newspaper articles 13–33 times more often during incidents compared with background periods. State wildlife agency commissioners and hunters were part of a discourse coalition that advocated killing cougars to solve problems, blamed cougars and those who promoted the animals' intrinsic value and sought to retain power to define and solve cougar-related problems. Personnel from affected state and federal agencies expressed a similar discourse. Environmentalists, animal protection activists, and some elected officials were of a coalition that defined "the problem" primarily in terms of people's behaviors, including behaviors associated with current institutional arrangements. This discourse advocated decentralizing power over cougar management. The discourses reflected different preferences for the allocations of power and use of lethal versus non-lethal methods, which aligned with apparent core beliefs and participants' enfranchisement or disenfranchisement by current state-level management power arrangements.

Keywords Focusing event · Wildlife management · Coalition · Power · Decision process

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Introduction

In this study, we describe the content and structure of discourses that were part of two policy incidents triggered by state-level management of cougars (*Puma concolor*) in Arizona. The cougars that were involved were targeted for removal because they were considered a threat to people using popular recreation areas at the wildland–urban interface. These incidents clarified the different perspectives and alliances of people who had a stake in cougar management. The incidents were also emblematic of the increasingly polarized nature of wildlife management and the emergence of new strategies used by historically disenfranchised participants to perturb dominant discourses and gain access to power.

State-level wildlife management in the United States has become increasingly contested during the last three to four decades, which is problematic for those who are interested in sustaining a civil society (Nie 2004a, b; Clark and Rutherford 2005). Conflict among stakeholders is rooted in the comparatively recent diversification of people's views regarding proper relations between humans and wildlife, which is linked in turn to demographic and other social changes (Kellert 1996; Manfredo et al. 2003, 2009). Those who are younger, female, urban dwelling, better educated, or employed in economic sectors other than agriculture tend to value wildlife for intrinsic reasons, prize the beauty and wildness of nature, and view animals in human terms (Kellert 1996). By contrast, those who are older, male, rural dwelling, less well educated, or employed in agriculture tend to instrumentalize wildlife and believe that domination is the appropriate relationship of humans with nature (Kellert 1996). State-level wildlife management almost exclusively serves the interests of this latter group through a system focused on providing hunting opportunities and generating revenue from sales of hunting licenses (Decker et al. 1996; Gill 1996; Hagood 1997; Rutberg 2001; Nie 2004a, b; Clark and Rutherford 2005; Jacobson and Decker 2006). By contrast, the views and preferences of biocentric stakeholders are largely unrepresented. Those advocating environmental or animal protection and welfare agendas have consequently resorted to strategies that challenge existing institutional arrangements, including ballot initiatives, litigation, lobbying, and the creation of incidents (Nie 2004a; Mattson and Clark 2010a).

Incidents are distinctive phenomena that shape wildlife and natural resource management in the United States (e.g., Birkland 1998, 2006; Davis 2006). They can be recognized by shifts in the intensity and focus of public discourses (Reisman1988; Baumgartner and Jones 1993; Birkland 1998, 2006), including escalated frequency of references to focal issues, increased attention to defining problems (Birkland 1998, 2006), partisan uses of information, and promotion of preferential solutions (Rochefort and Cobb 1993; Dery 1984). Problem definition comes to the forefront during incidents plausibly because whichever definition "wins" typically dictates which solution will be enacted (Dery 1984; Lasswell and McDougal 1992), which is tantamount to controlling decisions about who gets what values, where, and when (Lasswell 1950). One of the most important values at stake in contests over problem definition is power, or who has authority and control over which matters at what times (Lasswell and McDougal 1992). Problem definition also specifies who or what is culpable, therefore warranting dismissal, punishment, or, in the case of animals, even death (Shaver 1985; Stone 1989; Iyengar 1991; Alicke 2000).

Incidents are but one way of framing the analysis of factors that drive and govern the rate, outcomes, and effects of policy change. Kingdon (1984), Baumgartner and Jones (1993), and Birkland (1998) popularized the concept of focusing events, which encompasses the concept of incidents as defined by Reisman and Willard (1988). By definition,

incidents pertain to periods of highly accentuated and reconfigured dynamics, whereas focusing events encompass a broader spectrum of rates and states. We employ the term "incidents" here because it more accurately describes the dynamics of our focal cases, is onomatopoetic, has widely recognized meaning, reflects the pioneering nature of Reissman and Willard's work, and follows the tradition of policy sciences inquiry. The concept of incidents explicitly accommodates other traditions of inquiry into policy change, including venue shopping (Baumgartner and Jones 1993), the effects of policy entrepreneurs (Mintrom and Norman 2009), issue containment and expansion (Schattschneider 1960), dynamics of attention among elites (Jones 1994), and punctuated equilibria (Baumgartner and Jones 1993). Incidents are plausibly one phenomenon that can trigger transitions in stable states, but typically only within destabilizing contexts that substantially undermine the influence and power of dominant discourses and coalitions (Birkland 2006).

Even though incidents are probably common and important phenomena in natural resource policy processes, they have not received much explicit attention by analysts who specialize in this domain. Most descriptions of environmental cases contain tacit reference to incidents, but this is not the same as overt consideration of how incidents are created, maintained, and terminated, and how discourses and resulting policy dynamics are affected. Reisman (1988) made a compelling case for the importance of studying international incidents because of the extent to which these phenomena can reconfigure the norms and expectations embedded in international institutions. Much of the same could be said about incidents in wildlife management. Cromley (2000) provided perhaps the most complete analysis of an incident in wildlife management, focused on conflict over management of grizzly bears and livestock on National Park Service lands in the Yellowstone Ecosystem. Her analysis illustrated the extent to which incidents can mobilize transient participants, clarify otherwise undisclosed expectations, and shape subsequent practices and policies.

Two incidents were triggered in Arizona during the 2000s by routine plans to kill cougars that wildlife and land managers had judged to be a threat to people using recreation areas at the urban–wildland interface of Flagstaff and Tucson. A series of threatening encounters between people and cougars occurred on Mt. Elden (just outside Flagstaff, Fig. 1) during the winter of 2001–2002, which precipitated plans by wildlife managers to kill the involved cougars. A similar scenario unfolded in Sabino Canyon (just outside Tucson, Fig. 1) during the winter and early spring of 2004. The public outcry against these planned killings was heavily reported in local newspapers.

In this study, we analyze the Mt. Elden and Sabino Canyon incidents primarily through the discourses reported in local newspapers. We had several research objectives: (1) describe differences in discourse intensities and focus between incidents and background periods; (2) describe and explain competing discourses in terms of perceived problems, advocated solutions, and related allocations of responsibility and blame; (3) determine if and how participants aligned with different discourses in the form of discourse coalitions (Hajer 1995); (4) describe how factual assertions varied among different discourses (e.g., "claims" and "counter-claims"; Clark and Rutherford 2005; Mattson and Chambers 2009); (4) address relations among discourses, worldviews, and institutionalized access to power; and (5) examine the outcomes and effects of these incidents. We considered these matters central to understanding the perspectives, strategies, and, ultimately, the institutional effects of participants in these seminal incidents.

Fig. 1 Photographs of areas where conflict between cougars and people occurred, triggering incidents documented in the Flagstaff *Daily Sun* and Tucson *Daily Star*; Mt. Elden with Flagstaff in the foreground (*top*), and the Sabino Canyon area with Tucson in the foreground (*bottom*)

Methods

Analytic frames

We framed our inquiry according to Lasswell's classic formulation of the policy process: *people seeking values through institutions using resources* (Lasswell 1971:19). We understand *values* to be tangible and intangible indulgences that people seek from the world, expressed as fundamental and abiding orientations (Lasswell and Holmberg 1992). Power, respect, rectitude (i.e., morally correct outcomes), and enlightenment are values commonly sought by people in cases such as the ones examined here. Power is usefully decomposed into authority and control (Lasswell and Kaplan 1950; Lasswell and McDougal 1992:399–452) and derivative considerations of responsibility and accountability (Shaver 1985; Stone 1989). All of these aspects of power were at stake in the Mt. Elden and Sabino Canyon incidents. We understand *institutions* to be, in this case, not simply organizations associated with wildlife management, but rather norms of

expectations and behaviors related to wildlife-specific decisions, established and perpetuated primarily by those with power (Clark and Rutherford 2005). We also understand *resources* broadly to include not only money, but also power, legitimacy, moral authority, information, and so on, all of which were used by participants in these incidents (Edwards and McCarthy 2004). Most policy change researchers use a much narrower conception of the policy process, focused on formal authoritative policies, or decisions by elites and "sovereigns" (e.g., Sabatier 1988).

We also framed our inquiry in terms of discourses and discourse coalitions. We defined discourses as manifestations of internalized language and cultural patterns that expressed beliefs about how the world is and should be (i.e., worldviews, per Koltko-Rivera 2004), with embedded configurations of power. Our conception of discourse closely followed that of Foucault [1972; see Mills (2004) for a review] and others in the tradition of critical discourse analysis (Phillips and Hardy 2002), with its explicit focus on language, belief, and the construction and maintenance of power. Rather than focusing on advocacy coalitions (Sabatier 1988), we focused instead on discourse coalitions (Hajer 1995), which naturally followed from using discourses as a frame and texts as evidence. We considered narratives to be an integral part of discourses (Dryzek 1997; Fischer 2003), but typically not directly accessible to us through newspaper texts because of the extent to which journalists fragmented the source narratives by using isolated attributions and quotes. Conceptions vary, but narratives are often defined as consisting of evocative characters, event sequencing, disruptions, lived experiences, and reference to specific contexts (situatedness; Stone 2002; Herman 2009). Much of this got lost in journalistic "translation." But, consistent with a long-standing and well-developed tradition of research [e.g., recently Harker and Bates (2007); Siemer et al. (2007); Jacobson et al. (2012)], we did consider editorials, letters to the editor, quotes, and attributions to be useful evidence of participant perspectives. Moreover, we used the term "narrative" to characterize the coalition-specific scripts (see "Discussion") that we integrated and synthesized from the fragmented evidence.

In addition to the discourse frame and Lasswell's basic conception of the policy process, we used meta-theoretic concepts that are central to understanding any policy dynamic, yet do not impose unduly restrictive filters on the participant discourses. These concepts were the following: problems, solutions, and assertions about the state of the world ("facts"). Problem definition is central—although sometimes tacitly so—to any policy process and consistent with the tenets of problem orientation (Clark 2002). Solutions are equally central, but naturally coupled to how problems are defined. Our focus on problems and solutions is thus consistent with the primacy given these notions by numerous policy analysts (e.g., Stone 2002), as well as the framing employed by Howland et al. (2006) in their policy sciences-informed analysis of media content. Participant claims about reality ("facts") are equally important because they reflect a mix of core beliefs, understandings of causal structures, and strategic deployments of information (McBeth et al. 2005, 2007). We were not able to disentangle these various impulses, yet participants' factual assertions substantially contributed to our interpretation of the discourses. Our use of these basic concepts to elucidate patterns of discourse was at variance with paradigms of research that inquire of texts as a means of testing prior constructs, such as metrics for scoring how participants explicitly orient to different worldviews or issues (e.g., McBeth et al. 2005, 2010). Consistent with the tenets of grounded theory, our analytic goal was instead to elucidate, confirm, and clarify patterns of discourse content and alliances that emerged from examination of our textual data.

Technical methods

We obtained discourse content from local newspapers that reported on these incidents in Flagstaff (the *Daily Sun*; http://azdailysun.com/) and Tucson (the *Daily Star*; http://azstarnet.com/). We comprehensively surveyed these outlets for any article, editorial, or letter to the editor that mentioned cougars or mountain lions for the years 1999–2007. We included this many years to ensure that we had enough information from non-incident periods to establish patterns of the "background" discourse (Sabatier 1988). We read every article mentioning cougars or mountain lions to obtain five categories of information: (1) the date; (2) the specific and generic identities of people who were quoted or otherwise attributed; (3) statements of putative "fact" pertaining to cougars and cougar-related matters; (4) statements regarding the existence and nature of a "problem" related to cougars or cougar management; and (5) statements describing or advocating solutions to identified problems. Each statement of a fact, problem, or solution was treated as a separate record and specifically linked to an identity and date. We summarized the statements in an effort to distill the essence of the communication. This interpretative approach is consistent with, and in the tradition of, subjective contextual analyses of texts (Tischer et al. 2000). We recorded 74 different types of problem statements, 69 different types of solution statements, and 150 different types of assertions of fact from our direct reading of texts.

We consolidated these statements into 13 fact categories, 14 problem categories, and 15 solution categories for the purposes of statistical analysis and synthetic interpretation. Following the precepts of grounded theory, these categories emerged from logical groupings of statements and were not developed in order to conform to prior theoretical considerations (Tischer et al. 2000; Hsieh and Shannon 2005). We also categorized individual participants in cougar discourses according to 16 different generic identities (Table 1). These identities emerged from observed patterns of statements, differences in societal roles (e.g., journalists vs. others), differences in allocations of formal authority (e.g., agency personnel and elected or appointed officials vs. others), and differences in self-described interests (e.g., environmental or animal protection advocates or members of different political parties). We tallied the frequency with which different generic participants made statements according to the broad categories of facts, problems, and solutions, differentiating statements made in the *Daily Sun* from those made in the *Daily Star*. We thus obtained a summary matrix with generic participants (by source) as rows, statement categories as columns, and frequencies of statements (by participants by categories) as the body.

We subjected our summary matrix to several statistical analyses to clarify and confirm patterns. We first clustered generic participants, differentiated by source, according to similarities with which they made different statements (i.e., similarities of statement frequency vectors). We obtained distinct clusters, one each for asserted facts, stated problems, and advocated solutions. We weighted contributions of generic participants by the number of statements attributed to each; in other words, participants identified with more statements contributed proportionately more to determining cluster structure, but statements were scaled so as to not inflate degrees of freedom. We used Ward's method (Ward 1963) applied to centered and normalized data, standardized as proportions. Ward's method joins clusters so as to maximize the likelihood at each level of the cluster hierarchy by minimizing the within-cluster sums-of-squares. Distances between clusters are the analysis of variance (ANOVA) sums-of-squares added over all vector variables. We used visual inspection of cluster structure, semi-partial R^2 (i.e., proportional variance obtained by standardizing sums-of-squares to the total), pseudo-F statistics (Calinski and Harabasz

Table 1 Acronyms and descriptions of participant groups used in summary statistical analyses of narratives documented in the Tucson *Daily Star* and the Flagstaff *Daily Sun*, 1999–2007

Acronym	Description
G&F	Personnel employed by a state wildlife management agency
COMM	Wildlife management agency commissioner
HUNT	Self-identified big game hunter
FEDS	Personnel employed by a federal land management agency
RPE	Elected or appointed official identified as a Republican
DPE	Elected or appointed official identified as a Democrat
PUBV	Member of the public who was involved in a close encounter with or attacked by a cougar
PUB	Undifferentiated member of the general public
ED	Newspaper editor or reporter writing an opinion piece
RES	Self-identified wildlife researcher
ENV	Self-identified member of environmental activist group
AR	Self-identified member of animal protection or welfare activist group
EDUC	Educator
RNCH	Rancher
RPRT	Newspaper reporter
POL	Law enforcement officer
-DS	Quoted or similarly attributed in the Flagstaff *Daily Sun*
-Str	Quoted or similarly attributed in the Tucson *Daily Star*

"-DS" and "-Str" are suffixes applied to acronyms to differentiate quotes or attributions for the same participant groups in *Daily Sun* and *Daily Star*, respectively. Bolded names denote participants that were used in the cluster analyses

1974), and practical considerations to define numbers of clusters. Practical considerations included the potential for interpretation.

We used canonical discriminant analysis to evaluate the strength and magnitude of differences among mean statement vectors associated with each cluster (Klecka 1980). Units of analysis were statement vectors associated with participants. We used Wilks' λ and its associated F-statistic to judge multivariate differences among mean statement vectors associated with clusters and to judge the contribution of eigenvalues (associated with canonical variates) to explaining overall variance (Rao 1973). We used univariate ANOVA (for each statement category) and loadings of individual variables (i.e., statement categories) on canonical variates to identify statement categories that contributed most to differences among clusters. We adopted a priori $\alpha = 0.01$ for tests of statistical significance, but without imputing literal probabilities of committing a type I error. As in the cluster analyses, we weighted the contribution of each case by the total number of associated statements, but scaled so as to not inflate degrees of freedom. We interpreted mean vectors to be the discursive tendencies of participants who clustered together, and we interpreted statement categories that differed most in relative frequency among clusters (whether by ANOVA or loadings on canonical variates) to be diagnostic of differences among discourses.

We also tallied the frequency of statement categories for facts, problems, and solutions for incident versus background periods. We used the likelihood ratio χ^2 statistic to quantify differences in relative frequencies between background and incident periods and then used cell-specific χ^2s to identify statement categories that contributed most to the overall

observed difference (Agresti 2002). We also used the likelihood ratio χ^2 statistic to evaluate differences in the frequencies with which different individuals were quoted or attributed between incidents and background periods.

Results

We recorded 383 problem statements, 369 solution statements, and 630 statements of "fact" in a total of 891 cougar-related texts published in articles appearing in the Flagstaff *Daily Sun* and Tucson *Daily Star* during 1999–2007 (a given text could contain more than one statement of more than one type). These statements were attributed to 187 different people quoted in the *Daily Sun* and 261 different people quoted in the *Daily Star*, of which 48 appeared in both venues (25.7 and 18.4 % of the total, respectively). Comparing incident and background periods for the *Daily Sun*, individuals who had only one (vs. > 1) quote comprised 70.1 and 72.9 % of the total, respectively. For the *Daily Star*, these values were 73.6 and 76.0 %. Individuals who had ≥ 4 quotes comprised 9.2, 7.5, 7.0, and 5.1 % of the total, respectively. We concluded from these results that there was no evidence for a comparative handful of participants dominating the published discourses during either incidents or background periods. We also found no overall difference in frequencies of individuals with 1, 2, 3, and ≥ 4 quotes between incidents and background periods in either venue (*Daily Sun*: $\chi^2 = 0.39$, $df = 3$, $p = 0.941$; *Daily Star*: $\chi^2 = 1.56$, $df = 3$, $p = 0.669$).

Incidents versus background periods

Incidents were clearly identifiable by a marked spike in frequency of references to cougars and mountain lions (Fig. 2). The Sabino Canyon incident was signaled by a spike during March–May 2004 in both the *Daily Star* and *Daily Sun*, whereas the Mt. Elden incident was signaled by a spike only in the *Daily Sun* during December 2001. On the basis of these spikes, as well as explicitly identified coverage of incident preludes and aftermaths, we defined the Sabino Canyon incident as lasting March–May 2004 and the Mt. Elden incident as lasting November 2001–Feburary 2002. Using frequencies for 2-month (i.e., bimonthly) periods, the *Daily Sun* referenced cougars 13.2× more often during the Mt. Elden incident and 17.0× more often during the Sabino Canyon incident compared with background periods, when bimonthly references to cougars averaged 4.2. The Sabino Canyon incident was signaled even more dramatically in the *Daily Star* by a 33.5× bimonthly increase in references to cougars over the background average of 5.7.

The focus of the discourses reported in both the *Daily Sun* and *Daily Star* differed in broad terms between incidents and background periods. During incident periods, attributions with a problem statement increased from 38 to 50 % of the total and attributions with a solution statement increased from 34 to 51 % (problems: $\chi^2 = 14.8$, $df = 1$, $p < 0.001$; solutions: $\chi^2 = 26.2$, $df = 1$, $p < 0.001$). In contrast, attributions containing a statement of purported fact declined from 78 to 62 % of the total ($\chi^2 = 28.1$, $df = 1$, $p < 0.001$). Percentages sum to >1 for incidents and background periods because single attributions typically contained more than one kind of statement. Overall, statements focused more on identifying problems and solutions and less on sharing information during incident periods compared with background periods.

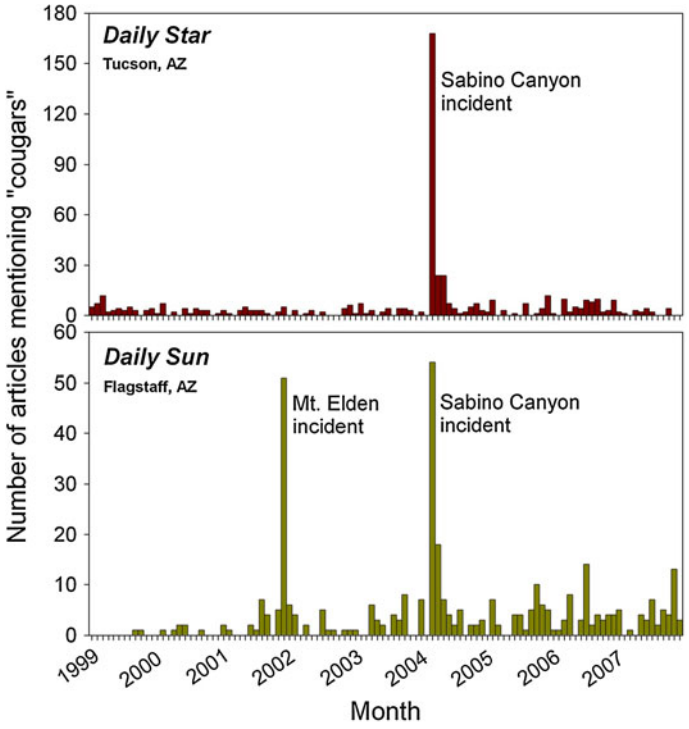

Fig. 2 Frequency of references to cougars or mountain lions by month, 1999–2007, in the Tucson *Daily Star* (*top*) and Flagstaff *Daily Sun* (*bottom*), with the spikes signifying the Mt. Elden and Sabino Canyon incidents

The overall frequencies of different statement categories also differed between incidents and background periods, for problems ($\chi^2 = 94.9$, $df = 13$, $p < 0.001$), solutions ($\chi^2 = 99.4$, $df = 14$, $p < 0.001$), and asserted facts ($\chi^2 = 110.7$, $df = 12$, $p < 0.001$). During incidents, the perspectives and behaviors of people (environmental activists, agency personnel, and the general public; Table 2) as well as existing institutional arrangements and policies were more often considered to be problematic, whereas degradation of cougar habitat, lack of cougar sport hunting, and effects of cougars on prey were more often considered to be problematic during background periods. During incidents, solutions focused more on reforming management (e.g., emphasizing responsible behaviors of people when around cougars) and reflected differences in perspectives on the merits of killing problem cougars. During background periods, solutions tended to focus more on protecting cougar habitat and reflected differences in participant perspectives on the merits of hunting (Table 2). Facts stated by participants during incidents tended more often to express an official agency position, to note high levels of conflict among the involved people, or to reflect different understandings of the efficacy of lethal cougar management (Table 2). During background periods, facts more often pertained to cougar ecology (natural history, habitat relations, and habitat status), cougar-related educational activities, or the details of non-crisis encounters between cougars and people.

Table 2 Proportional frequencies of fact, problem, and statement categories during background periods and incidents, pooling the Sabino Canyon and Mt. Elden incidents and results from the *Daily Star* and *Daily Sun*

Categories of statements	Period		Cell χ^2	Domain of statement focus
	Incidents	Background		
'Facts'				
Position of a management agency	**0.111**	0.022	**13.201**	**Policy**
Support for non-lethal cougar management	**0.111**	0.049	**5.443**	**Policy (cougars)**
Support for lethal cougar management	**0.070**	0.030	**3.647**	**Policy (cougars)**
Conflict among people about cougars	**0.119**	0.066	**3.468**	**People**
An exchange of cougar-related information	*0.057*	*0.049*	0.136	Policy (intelligence)
Management activity related to cougars	*0.100*	*0.075*	0.803	Policy (cougars)
Cougars not being problematic	*0.095*	*0.083*	0.185	Cougars
Problems that cougars pose for humans	*0.095*	*0.105*	0.124	Cougars
Cougar habitat relations	0.086	**0.161**	**5.105**	**Cougars**
Cougar natural history	0.051	**0.130**	**7.617**	**Cougars**
A cougar-human incident	0.076	**0.122**	**2.446**	**Cougars**
Educational activities & effectiveness	0.011	**0.056**	**6.958**	**Policy (intelligence)**
Impacts of people on cougar habitat	0.019	**0.052**	**3.570**	**Cougars**
Problems				
Perspectives of environmental activists	**0.113**	0.053	**2.940**	**People**
Agency behaviors and arrangements	**0.174**	0.113	**1.731**	**People/Institutions**
Extreme public responses	**0.078**	0.032	**2.588**	**People**
Faulty policies or policy implementation	**0.065**	0.020	**3.156**	**Policy**
Logistics of cougar management	**0.065**	0.020	**3.156**	**Biophysical**
Public behaviors related to cougars	*0.116*	*0.150*	0.579	People
Management killings of cougars	*0.089*	*0.069*	0.340	Policy
Cougar behaviors	*0.130*	*0.105*	0.343	Cougars
Inadequate information	*0.061*	*0.036*	0.862	Policy (intelligence)
Too much killing/not enough cougars	*0.014*	*0.012*	0.012	Policy (cougars)
Behaviors of environmental activists	*0.021*	*0.020*	0.000	People
Degradation of cougar habitat	0.065	**0.231**	**12.572**	**Cougars**
Effects of predation on valued prey	0.007	**0.117**	**13.288**	**Cougars**
Lack of cougar sport hunting	0.003	**0.020**	**1.616**	**Policy (cougars)**
Solutions				
Lethally manage problem cougars	**0.150**	0.059	**4.851**	**Cougars**
Emphasize responsible human behavior	**0.154**	0.069	**3.962**	**People**
Non-lethally manage cougars	**0.158**	0.024	**11.756**	**Cougars**
Reform current cougar management	**0.054**	0.015	**2.690**	**Policy/Institutions**
Recommend behaviors to avoid encounters	0.104	0.122	0.185	People
Recommend actions to prevent conflict	0.165	0.186	0.158	People
Preserve or enhance agency prerogatives	0.057	0.059	0.002	Policy/Institutions
Met out punishment to people	0.025	0.029	0.041	People
Emphasize primacy of humans	0.007	0.020	0.698	Philosophy

Table 2 continued

Categories of statements	Period		Cell χ^2	Domain of statement focus
	Incidents	Background		
Recommend lethal protection from cougars	0.004	0.010	0.349	People
Engage in activist strategies	0.007	0.005	0.051	Policy
Focus on information strategies	0.054	**0.103**	**1.864**	**Policy**
Protect cougar habitat	0.025	**0.142**	**9.895**	**Policy (cougars)**
Reduce cougar hunting	0.029	**0.078**	**2.791**	**Policy (cougars)**
Increase cougar hunting	0.008	**0.078**	**7.164**	**Policy (cougars)**

Cell χ^2 values are the contribution of each category to the overall χ^2 value, differentiating fact, problem, and solution categories. Bolded values differentiated incidents from background periods

Discourses regarding problems

We differentiated four clusters of participant categories based on the similarities of their discourses regarding the existence and nature of "problems" (Table 3). These clusters consisted of 24 participant categories, one each of 12 (Table 1) participating in the discourses reported in the *Daily Sun* (Sun) and *Daily Star* (Star), respectively. We named these clusters based on the focus of the problem statements made by the participants. We highlight differences in the discourses below, although all generic participants tended to express concern about the degradation of cougar habitat, which constituted the most obvious common ground when it came to defining problems (Table 3).

Cougars

The first cluster of participants focused on problems posed by the animals themselves and consisted of wildlife agency personnel, federal land managers (in the *Star*), and members of the public who had been involved in close encounters with cougars (in the *Star*) (Fig. 3). Their discourse regarding "problems" was differentiated from all others by a focus on problematic behaviors of cougars, problematic behaviors of the public when around cougars, the effects of cougar predation on animals valued for sport hunting [e.g., mule deer (*Odocoileus hemionus*)], and also partly by the difficult logistics of managing problem cougars (Table 3).

Non-hunters

The second cluster of participants focused on problems posed by non-hunters and consisted of hunters and wildlife agency commissioners (Fig. 3). Their problem discourse was differentiated by a pronounced focus on the "problematic" perspectives of environmental and animal protection/welfare activists, by the problem of extreme public responses to cougar management, and, like those aligned with *Cougars*, the effects of cougar predation on animals valued for sport hunting (Table 3).

Table 3 Groups defined by clustering problem statement frequencies of participants in the Tucson *Daily Star* and the Flagstaff *Daily Sun*, 1999–2007

Categories of problem statements	Groups based on focus of problem statements				Univariate ANOVA		Standardized loading	
	Non-hunters	Cougars	Public	Agencies	*F*	*P*	CAN1	CAN2
Effects of predation on valued prey	**0.157**	**0.100**	0.030	0.008	5.93	**0.005**	0.714	**1.195**
Perspectives of environmental activists	**0.386**	0.045	0.051	0.008	35.83	**<0.001**	**1.219**	**2.633**
Cougar behaviors	0.057	**0.391**	0.071	0.008	29.35	**<0.001**	**3.682**	−0.127
Extreme public responses	**0.114**	0.018	**0.102**	0.008	5.75	**0.005**	**1.867**	0.656
Public behaviors related to cougars	0.000	**0.136**	**0.193**	0.091	5.92	**0.005**	**1.761**	**−1.290**
Degradation of cougar habitat	*0.057*	*0.091*	*0.178*	*0.124*	1.32	0.296	0.522	0.273
Management killings of cougars	0.029	0.009	**0.117**	**0.182**	8.03	**0.001**	−0.172	0.150
Agency behaviors and arrangements	0.071	0.009	0.076	**0.380**	23.38	**<0.001**	**−0.844**	0.970
Behaviors of environmental activists	0.000	0.045	0.015	0.000	3.09	0.050	−0.082	0.314
Too much killing/not enough cougars	0.000	0.000	0.015	0.033	1.16	0.349	−0.310	−0.072
Logistics of cougar management	0.057	0.082	0.025	0.008	2.24	0.115	**1.106**	**−0.829**
Lack of cougar sport hunting	0.057	0.018	0.010	0.008	1.38	0.278	0.051	**1.008**
Faulty policies or policy implementation	0.014	0.018	0.051	0.074	0.62	0.612	0.398	−0.005
Inadequate information	0.000	0.036	0.066	0.066	1.40	0.271	0.000	0.000
					Eigenvalue	Prop. of S^2	*P*	
Canonical variate 1 (CAN1) mean	**−1.747**	**1.409**	0.382	0.150	30.11	0.592	<0.001	
Canonical variate 2 (CAN2) mean	−0.140	−0.475	**2.082**	−0.388	18.01	0.946	<0.001	
Canonical variate 3 (CAN3)					2.77	1.000	0.078	

The main table body under the group names consists of proportional frequencies of different problem statements. The ANOVA statistics are for univariate tests of differences of mean proportions, by problem statement, among groups. Standardized loadings are for problem statements onto canonical variates derived from canonical discriminant analysis. Statistics are given for canonical variates at the bottom of the table, with means given for the different groups, but only for canonical variates that significantly contributed to explaining total variance. Bolded values differentiate groups or denote significant canonical variates

Public

The third cluster of participants focused on the public and consisted of a large and diverse group, including the general (undifferentiated) public, newspaper editors, cougar researchers, elected Republican officials, federal land managers (in the *Sun*), and members of the public who had been involved in close encounters with cougars (in the *Sun*) (Fig. 3). This pervasive discourse was distinguished by a focus on "problems" caused by the

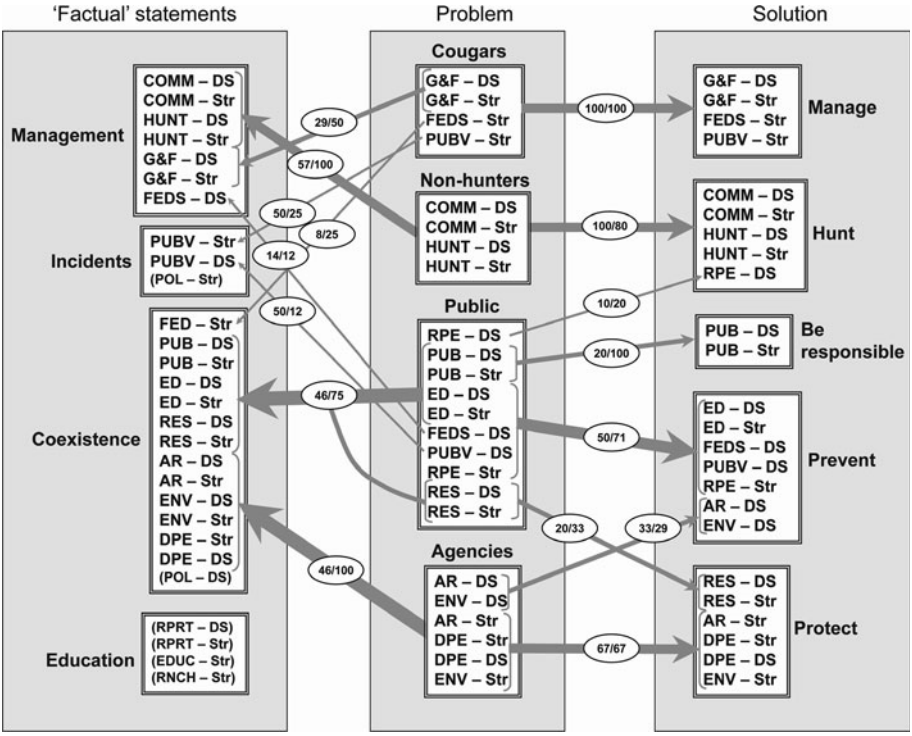

Fig. 3 Clusters of participants according to their frequencies of factual, problem, and solution statements in the Tucson *Daily Star* (Str) and Flagstaff *Daily Sun* (DS), 1999–2007, with linkages between clusters, among domains, signified by *arrows*. Definitions of participant acronyms are in Table 1. The numbers shown in *ovals* on *top* of *arrows* are the percentages of the total cluster participants at the *arrow's* end and at the *arrow's* origin comprised of the participants identified with the linkage. The thickness of *arrows* is proportional to the number of groups associated with each loading, and the direction of the *arrow* implies the centrality of problem definition, with solutions and "factual" statements to be primarily derivative phenomena

behaviors of the public when around cougars, extreme public responses, and killings of cougars by managers for a range of reasons (Table 3). This cluster of participants expressed a problem narrative that bridged and was partly related to the discourses of the other three participant clusters.

Agencies

The fourth cluster of participants focused on problems posed by the management agencies (Fig. 3) and consisted of environmentalists, animal protection/welfare activists, and elected and appointed Democratic officials. These participants were unique in considering the behaviors, policies, and arrangements of wildlife management personnel and agencies to be particularly problematic. Like those aligned with *Public*, they also considered killings of cougars by managers for virtually any reason to be a problem.

Discourses regarding solutions

We differentiated five clusters of participants based on the similarities of their discourses regarding the solutions advocated for defined problems (Table 4). We named these clusters based on the focus of the solutions promoted by the participants associated with each cluster. Aside from the differences highlighted below, the most prominent common ground was a tendency for all of them to promote educational and informational strategies (Table 4).

Manage

The first cluster of participants focused on solutions entailing management of people and animals and consisted of wildlife agency personnel, federal land managers (in the *Star*), and those who had been involved in close encounters with cougars (in the *Star*; Fig. 3). Their discourse focused on solutions involving killing problem cougars, the promotion of actions to avoid or minimize the harm to people from cougars, measures to reduce human–cougar conflict overall, and the punishment of people who had violated laws or other authoritative strictures (Table 4).

Hunt

The second cluster focused on solutions involving hunting and consisted of hunters, wildlife agency commissioners, and elected Republican officials (the *Star* only; Fig. 3). Their discourse focused on solutions that entailed killing cougars, either for sport or to resolve conflicts, as well as measures designed to preserve or enhance wildlife agency power and prerogatives (Table 4).

Be responsible

The third cluster focused on solutions entailing responsible personal behaviors and consisted only of members of the general public (Fig. 3). Their solutions focused on encouraging or requiring people to be responsible for their behaviors around cougars, taking actions that would reduce the potential for conflict between people and cougars, and non-lethal approaches to managing cougars that potentially posed a threat to humans (Table 4).

Prevent

The fourth cluster focused on solutions that might prevent problems and comprised diverse participants, including editors from both newspapers; in the *Sun*, federal land managers, people involved in close encounters, and environmentalists and animal protection activists; and, in the *Star*, elected Republican officials (Fig. 3). This discourse was closely related to the *Be responsible* narrative, but placed greater emphasis on measures to prevent conflict and to reduce sport hunting of cougars, in addition to requiring or encouraging greater responsibility among people for their behavior when around cougars (Table 4).

Table 4 Groups defined by clustering solution statement frequencies of participants in the Tucson *Daily Star* and the Flagstaff *Daily Sun*, 1999–2007

Categories of solution statements	Groups based on focus of solution statements					Univariate ANOVA		Standardized loading	
	Hunt	Manage	Be Responsible	Prevent	Protect	*F*	*P*	CAN1	CAN2
Lethally manage problem cougars	**0.216**	**0.292**	0.111	0.011	0.009	27.90	**<0.001**	−0.244	**−3.071**
Preserve or enhance agency prerogatives	**0.490**	0.019	0.011	0.033	0.028	25.26	**<0.001**	**3.001**	**−2.752**
Increase cougar hunting	**0.118**	0.078	0.000	0.022	0.008	4.83	**0.007**	**2.056**	0.578
Recommend behaviors to avoid encounters	0.000	**0.243**	0.111	0.087	0.055	4.61	**0.009**	**4.853**	**1.023**
Recommend actions to prevent conflict	0.039	0.136	0.144	**0.348**	0.092	11.52	**<0.001**	**4.333**	**1.853**
Emphasize responsible human behavior	0.020	0.019	**0.333**	0.120	0.101	13.51	**<0.001**	**−3.779**	0.218
Non-lethally manage cougars	0.020	0.049	**0.167**	0.076	**0.193**	3.28	0.033	**1.230**	0.772
Focus on information strategies	*0.039*	*0.068*	*0.033*	*0.065*	*0.119*	1.24	0.329	**2.467**	0.628
Reform current cougar management	0.020	0.010	0.011	0.022	0.110	1.41	0.269	0.000	0.000
Protect cougar habitat	0.000	0.019	0.022	0.087	**0.156**	2.54	0.074	−0.499	0.456
Reduce cougar hunting	0.020	0.000	0.022	**0.109**	0.064	2.49	0.078	**1.723**	0.410
Recommend lethal protection from cougars	0.000	0.010	0.011	0.000	0.000	0.33	0.855	**1.231**	0.248
Emphasize primacy of humans	0.020	0.000	0.000	0.000	0.000	1.44	0.260	−0.005	0.257
Engage in activist strategies	0.000	0.000	0.000	0.011	0.055	0.96	0.452	−0.010	−0.150
Met out punishment to people	0.000	**0.058**	0.022	0.011	0.009	4.26	0.012	**1.173**	0.399
						Eigenvalue	Prop. of S^2	*P*	
Canonical variate 1 (CAN1) mean	**1.870**	−0.438	**−2.113**	−0.815	1.181	51.18	0.530	<0.001	
Canonical variate 2 (CAN2) mean	−0.597	**−2.948**	0.198	0.654	**1.334**	36.51	0.907	<0.001	
Canonical variate 3 (CAN3) mean						5.08	0.960	0.014	
Canonical variate 4 (CAN4) mean						3.88	1.000	0.047	

The main table body under the group names consists of proportional frequencies of different solution statements. The ANOVA statistics are for univariate tests of differences of mean proportions, by solution statement, among groups. Standardized loadings are for solution statements onto canonical variates derived from canonical discriminant analysis. Statistics are given for canonical variates at the bottom of the table, with means given for the different groups, but only for canonical variates that significantly contributed to explaining total variance. Bolded values differentiate groups or denote significant canonical variates

Protect

The final cluster focused on protecting cougars and consisted of cougar researchers, elected or appointed Democratic officials, and environmentalists and animal protection activists reported in the *Star* (Fig. 3). This discourse emphasized non-lethal approaches to managing cougars as well as measures for protecting cougar habitat (Table 4).

Discourses of asserted facts

We differentiated four clusters of generic participants based on the similarities of facts that they asserted in the reported discourses (Table 5). Aside from the differences that defined the clusters, all participants tended to observe—factually—that there were high levels of conflict among people involved with cougars and cougar management.

Management

The first cluster of participants focused on facts related to management issues and consisted of wildlife agency personnel, wildlife agency commissioners, hunters, and federal land managers (in the *Sun*; Fig. 3). The facts offered by these participants provided information on agency positions, policies, or management actions, highlighted the problems posed for people by cougars, and supported the use of lethal management practices.

Coexistence

The second and by far the largest cluster focused on facts related to coexisting with cougars and consisted of the general public, newspaper editors, cougar researchers, environmentalists, animal protection activists, elected or appointed Democratic officials, and federal land managers (only in the *Star*; Fig. 3). The facts asserted by participants in this cluster supported the notion that cougars were not problematic for people, touted the efficacies of non-lethal management, and offered support for protecting cougar habitat (Table 5).

Education

The third cluster consisted of participants who were publicly vocal only during background periods and who were not identified with problem or solution statements. These participants included newspaper reporters, educators, and conservation ranchers. Their facts focused on education related to cougar natural history and habitat relations, as well as cougar-related educational activities and the efficacies of educational programs (Table 5).

Incidents

The fourth and final cluster focused on incidents and consisted only of those who had been involved in close encounters with cougars and law enforcement officials who had investigated these encounters (in the *Star*) (Fig. 3). The facts offered by these participants largely focused on details of their close encounters or investigations.

Table 5 Groups defined by clustering participants according to frequencies of factual assertions in the Tucson *Daily Star* and the Flagstaff *Daily Sun*, 1999–2007

Categories of "factual" statements	Groups based on "factual" statements				Univariate ANOVA		Standardized loading		
	Management	Coexistence	Education	Incidents	*F*	*P*	CAN1	CAN2	CAN3
Position of a management agency	0.101	0.052	0.000	0.022	1.59	0.216	0.037	**1.482**	−0.462
Problems that cougars pose for humans	**0.179**	0.065	0.027	0.067	13.47	**<0.001**	**−1.510**	**1.775**	−0.222
Management activity related to cougars	**0.146**	0.031	0.093	0.022	7.31	**0.001**	−0.509	**1.468**	0.730
Cougar habitat relations	0.104	0.157	0.169	0.022	2.39	0.092	−0.850	0.657	−0.280
Cougar natural history	0.065	0.096	**0.186**	0.022	7.41	**0.001**	0.000	0.000	0.000
Educational activities & effectiveness	0.003	0.006	**0.169**	0.000	10.90	**<0.001**	**−1.263**	0.218	0.187
Conflict among people about cougars	*0.060*	*0.099*	*0.104*	*0.178*	1.24	0.317	−0.054	0.837	0.213
Cougars not being problematic	0.068	**0.154**	0.022	0.044	6.72	**0.002**	0.032	0.861	**−1.043**
Support for non-lethal cougar management	0.033	0.130	0.038	0.044	2.91	0.054	0.338	**1.075**	**−1.065**
A cougar-human incident	0.065	0.074	0.104	**0.578**	36.81	**<0.001**	**3.019**	**1.858**	0.343
Support for lethal cougar management	0.074	0.052	0.005	0.000	2.80	0.061	0.671	**1.149**	0.260
Impacts of people on cougar habitat	0.027	0.043	0.033	0.000	1.46	0.250	0.329	0.745	−0.436
An exchange of cougar-related information	0.074	0.040	0.049	0.000	1.35	0.282	−0.158	0.839	−0.221

					Eigenvalue	Prop. of S^2	*P*
Canonical variate 1 (CAN1) mean	**−0.330**	0.172	−0.281	**2.367**	12.51	0.569	<0.001
Canonical variate 2 (CAN2) mean	**0.428**	−0.100	**−0.653**	0.181	5.77	0.832	<0.001
Canonical variate 3 (CAN3) mean	0.147	**−0.408**	0.323	**0.523**	3.70	1.000	<0.001

The main table body under the group names consists of proportional frequencies of different factual assertions. The ANOVA statistics are for univariate tests of differences of mean proportions, by fact statement, among groups. Standardized loadings are for factual assertions onto canonical variates derived from canonical discriminant analysis. Statistics are given for canonical variates at the bottom of the table. Bolded values differentiate groups or denote significant canonical variates

Linkages across topical domains

There were strong linkages made by participants across the domains of defined problems, offered solutions, and featured facts (Fig. 3). Those who defined *Cougars* as the

predominant problem ascribed exclusively to *Manage* solutions and largely voiced facts related either to *Management* or *Incidents*. Those who defined *Non-hunters* as the predominant problem exclusively sought *Hunt* solutions and exclusively volunteered *Management* facts. These two domain-spanning groups encompassed all of the participants identified directly with wildlife management agencies (personnel, commissioners, and hunters, who were the primary clientele of these agencies). At the other extreme, those who defined *Agencies* as the featured problem strove predominantly for *Protect* solutions and exclusively featured facts related to *Coexistence*. This domain-spanning amalgam comprised almost all the environmentalists, animal protection activists, and elected or appointed Democratic officials. The conceptual middle ground was occupied by a group of participants who linked problems focused on the *Public* with *Prevent* and *Be responsible* solutions, backed exclusively by *Coexistence* facts. This group occupying the middle ground most consistently included the general public and newspaper editors and aligned with cougar researchers on problems and asserted facts.

Discussion

Our study was potentially limited by its exclusive reliance on the written record in newspapers and agency reports for insight regarding the perspectives of participants in the Mt. Elden and Sabino Canyon incidents. Barring letters to the editor, reporters and editors had control over who was interviewed, what quotes or attributions were excerpted, what was included and excluded, what space was allocated, and what ancillary information, if any, was provided. As has been extensively documented elsewhere (e.g., Schlechtweg 1996; Scheufele 1999; Shanahan et al. 2008), reporters and editors filtered and contributed to the framing of these incidents, and editors clearly aligned with a particular discourse about problems, solutions, and relevant facts, which highlighted the potential for biased coverage.

However, several facts argue against concluding that coverage bias had a major effect on our inferences. First, following researchers such as van Dijk (1988) and Scheufele (1999), we were interested in public discourses in and of themselves, including how they intensified and shifted as a result of both participant perspectives and activities *and* news media coverage. Second, the sheer amount of coverage and the hundreds of quoted participants increased the odds that the full scope of perspectives was represented and appropriately attributed to participants. Likewise, this high volume likely contributed to capturing the complexities and contingencies of perspectives. And, third, we found no indication that staff of either the *Daily Sun* or the *Daily Star* had an overt partisan agenda relative to cougar management and the Mt. Elden and Sabino Canyon incidents. Our results show that editorials by editors of both papers aligned them with discourses that constituted the middle ground of both incidents, supported by cougar researchers, who were presumably the most reliable sources of information about cougars.

The nature of incidents

The Mt. Elden and Sabino Canyon incidents were marked by a dramatic spike in frequency of references to cougars in both local newspapers. The intensity signature was unambiguous. However, it is unlikely that so many people spontaneously had so much more to say about cougars during these brief periods. More likely, these spikes are evidence for a synergism among media coverage, amplified public attention, and a resulting widespread

crystallization of opinions (Van Dijk 1988; Birkland 2006). Although people perhaps had more to say about these incidents as they developed, newspaper reporters were clearly soliciting people's opinions. We also suspect that the "backyard" nature of these wildland–urban incidents engaged many otherwise unengaged urban residents (Ewert 1993; Patterson et al. 2003), who contributed to the intensity of these two incidents. Even though identical issues arose during background-period debates over the merits of killing cougars to benefit big game species such as bighorn sheep (*Ovis canadensis*), hunting typically occurs in rural areas, which tend to be home to disproportionate numbers of those with dominionistic worldviews traditionally served by wildlife management agencies (Kellert 1996; Dizard 2003; Mattson and Ruther 2012).

The focus of people's attention clearly shifted between background periods and incidents. Participants were more interested in defining problems and offering solutions during incidents, which is to be expected (Birkland 1998, 2006). Because the definition of problems and the promotion of related solutions are at the heart of politics (Dery 1984), the discourses of these incidents were more about power compared with the discourses of background periods. This pattern is consistent with our prior expectation that environmentalists' and animal protection activists' used such incidents to contest and call into question existing power arrangements organized around lethal practices (e.g., "solutions") rooted in perspectives that featured cougars as "the problem" (Mattson and Clark 2010a). These two incidents became opportunities for redefining problems and debating and contesting the merits of management methods, decision-making processes, and other status quo arrangements.

The nature of narratives in discourses

Four aggregate narratives emerged from the discourses of both the Mt. Elden and Sabino Canyon incidents. These narratives integrated problem definitions, derivative solutions, and supporting facts, and gave voice to the expectations and demands of coherent groups of participants in both incidents. When differentiated by the formal power of those who voiced them, the narratives could be interpreted as either dominant or counter-narratives in the discourse (Clark and Rutherford 2005). Likewise, contesting narratives could be interpreted as claims and counter-claims regarding key power-related matters, including who should have authority over cougars and cougar management, who should have voice and standing, who should be responsible for what matters, and who or what was to blame and therefore should be punished or controlled (Lasswell et al. 1966; Lasswell and McDougal 1992:1439; Clark and Rutherford 2005).

The cougar-focused narrative of agency authority

This narrative was voiced primarily by wildlife and land management agency personnel and linked the problem discourse of *Cougars* with the solution discourse of *Manage*, supported by the asserted facts of *Management*. Cougar behaviors and the behaviors of people when around cougars were considered to be primary problems, which meant that cougars and the public using cougar habitat were the blame-worthy parties. There was secondary concern about the effects of cougar predation on big game populations, which was a logical concern given that big game hunting licenses are a primary source of revenue for wildlife management agencies (Hagood 1997). The courts have also held these agencies culpable for wildlife-related injuries to people (Mangus 1991; Parker 1995), which would

predictably lead agency personnel to focus on the risks that cougars posed to people (Perry and DeVos 2005).

The solutions in this narrative logically followed from the perceived problems. The focus was on educating people or otherwise influencing them both to reduce conflicts and to better manage cougar encounters if they occurred. Cougars that were deemed to be a threat to humans were also to be killed, which was consistent with a widespread preference for lethal methods among state-level wildlife management agencies in the United States (e.g., Witter and Shaw 1979; Muth et al. 1998; Campbell and Mackay 2003; Koval and Mertig 2004; Heydlauff et al. 2006). The factual information offered by this narrative supported the efficacies of lethal control and highlighted the shortcomings of non-lethal tactics, such as translocating (rather than killing) problem cougars. The premise of agency authority and responsibility (i.e., power) was implicit to these solutions; it was up to the agency to solve the problems caused by people and cougars through control or influence of those who were culpable.

This story line could be understood as a dominant narrative articulated by those who held formal authority (Clark and Rutherford 2005). Matter-of-fact statements of authoritative perspectives and activities both informed the public and signified power. The focus of this narrative was almost exclusively on external technical matters, not on the process by which stakeholders were involved or otherwise dealt with in these incidents. This focus on content rather than process was consistent with the scientized nature of wildlife management and the related tendency to objectify problems rather than understand them as an extension of people's subjective demands on the world (Clark and Rutherford 2005; Mattson and Chambers 2009; Mattson and Clark 2010a). Overall, this narrative was a variant on a theme that has been repeatedly identified by other researchers, and voiced by government agents invoking their expertise to justify their investiture with power (e.g., Williams and Matheny 1995; Dryzek 1997; Clark and Rutherford 2005).

The power-focused narrative of agency authority

This narrative was voiced almost exclusively by wildlife agency commissioners and big game hunters. This alignment is not surprising, given that hunters are the primary clientele and constituency of state-level wildlife management and that most commissioners self-identify as avid hunters (Hagood 1997; Rutberg 2001; Nie 2004a, b; Clark and Rutherford 2005; Jacobson and Decker 2006; Mattson and Clark 2010a). These participants linked the problems caused by *Non-hunters* with solutions organized primarily around *Hunt*, supported by the asserted facts of *Management*. "Unreasonable," "over-reactive," and "ill-informed" non-hunters were seen as the primary problem, whether environmentalists, animal protection and welfare activists, or the general public. The demands expressed by these non-hunters were seen as a threat to the authoritative norms of wildlife management organized primarily around lethal management methods and the provision of hunting opportunities. Cougars were also seen as a problem, but primarily to the extent that they affected big game populations. Those who challenged existing wildlife management norms were to blame for the problems, as were cougars that hurt big game hunting opportunities.

Again, the solutions articulated in this narrative largely followed from the identified problems. Killing of cougars was a major theme, whether to increase big game populations or to remove cougars that were believed to threaten human safety, as during the Mt. Elden and Sabino Canyon incidents. This focus on killing is consistent with the dominionistic worldview commonly expressed by hunters (Mattson and Ruther 2012), affirmed by wildlife agency commissioners (Hagood 1997; Mattson and Clark 2010a), and

institutionalized by wildlife managers (Mattson and Clark 2010b). More important to this narrative, though, were solutions designed to fend off those who challenged existing authoritative practices and prerogatives, primarily under auspices provided by the incidents. As with the cougar-focused narrative above, asserted facts supported the use of lethal methods and affirmed the authoritative actions of agencies. This narrative was principally about power, especially control, whether over policy, people, or cougars, and about preserving that power for status quo interests. Invoking Weber's (1978) language, this narrative articulated a desire to perpetuate power and domination legitimized through identification with government bureaus, or, invoking Schattschneider (1960), this narrative was expressly about issue containment.

The people-focused narrative of responsibility and prevention

This domain-spanning narrative was voiced by a large number of participants, including the general public, newspaper editors, and some federal land managers and elected Republican officials. These participants linked a focus on problems caused by the *Public* with solutions emphasizing *Prevent* and *Be responsible*, supported by facts related to *Coexistence*. People and their behaviors were seen as the primary problem, including people failing to act in an appropriately defensive or preventive way when in cougar range, people failing to take responsibility for their actions when a problem with cougars did occur, and people being overly reactive or inflammatory when debating cougar management. According to this definition, people were accountable for the conflict with and about cougars, primarily because people, unlike cougars, had culpable control (cf. Stone 1989; Alicke 2000).

Like the problems, the solutions voiced in this narrative focused primarily on people and their behaviors and perspectives. Fundamentally, the people who potentially interacted with cougars were held responsible for preventing and managing conflict and were considered accountable for any undesirable outcomes should prevention and management fail. As a corollary, killing cougars was not seen as a way to prevent or rectify conflict. Most of the facts that were asserted by those aligned with this narrative either purported to establish the non-problematic nature of cougars, the inefficacy or undesirability of lethal methods, or the merits of non-lethal resolution of conflicts between humans and cougars.

This people-focused narrative differed markedly from that voiced by agency personnel, commissioners, and hunters. People rather than cougars were the principal focus. Moreover, differences were evident even when there was a shared focus on people. Commissioners and hunters selectively denounced those who contested institutionalized practices and power arrangements, whereas those who were identified with this people-focused narrative found extreme or uncivil behaviors, as such, to be problematic, regardless of what perspective was being advocated. Likewise, whereas agency personnel were focused on the problematic outcomes of people's behaviors around cougars, those who were aligned with this people-focused narrative found not only these same outcomes to be problematic, but also lack of accountability on the part of those who were involved. Most important, and consistent with a long-standing, often-articulated perspective (e.g., Wolch et al. 1997; Hoffman 2004; Papouchis 2004; Levy 2005), this narrative afforded people, not government agencies, key elements of power specifically related to their behaviors, including self-authority, self-control, self-responsibility, and accountability. Although this narrative did not overtly confront government agencies or agency personnel, it did tacitly contest the existing institutional arrangements of wildlife management by advocating different

allocations of power, consistent with the "pluralist language" of Williams and Matheny (1995) and the discourse of "democratic pragmatism" described by Dryzek (1997).

The power-focused narrative of agency reform and cougar protection

This narrative was voiced largely by environmentalists, animal protection advocates, and appointed or elected Democratic officials, who linked problems related to *Agencies* with solutions entailing *Protect* cougars, supported by facts about *Coexistence*. The practices, perspectives, policies, and other arrangements of government agencies and personnel were seen as the central problem, in particular when any of these institutional elements led to killing cougars as a means of preventing or resolving conflict between humans and cougars. The solutions called for by this narrative logically followed from this understanding of "the problem" by focusing on protecting cougars and their habitat, non-lethally managing cougars involved in conflicts, and reforming cougar management so as to allow greater participation by non-traditional stakeholders in wildlife management.

Consistent with the discourse of "reform" described by Clark and Rutherford (2005), this narrative and those who voiced it were directly contesting the dominant narratives voiced by those who held power. By countering both the institutionalized preference for lethal management and the closed nature of wildlife management decision making, the legitimacy and outcomes of current power arrangements were being contested. Similar power-focused dynamics in cougar management have been described by Baron (2004), Clark and Munno (2005), and Mattson and Clark (2010a).

There is little doubt that most of the conflict evident in the Mt. Elden and Sabino Canyon incidents was organized around the narratives and discourses of *agency authority* versus *agency reform* and the power implicitly or explicitly at stake. This pattern is consistent with a well-described phenomenon in environmental controversies of adversaries constructing dueling counter-narratives (Lange 1993; Moore 1993) focused on either containing or expanding an issue to political advantage (Schattschneider 1960). The conflicted demands and claims voiced in both narratives are traceable to different expectations regarding the proper relations between wildlife and people rooted in different worldviews. On the one hand was the utilitarian dominionistic view, which supported killing as a defining behavior, and on the other hand were more biocentric views, which aligned with valuing and protecting animals for intrinsic reasons (Kellert 1996; Mattson and Clark 2010b; Mattson and Ruther 2012).

Common ground

Even though our analysis focused on clarifying differences among conflicted narratives, we were also able to identify common ground. There was widespread recognition of conflict among people about cougars, although not all people considered this phenomenon to be particularly problematic. This factual recognition of conflict was consistent with previously documented shared interests in fostering civility among those involved in large carnivore management (Mattson et al. 2006). Regarding problems, there was also widespread concern about degradation of wildlife habitat, primarily by urbanization and other human encroachments. Regarding solutions, there was widespread acceptance of strategies that focused on education and dissemination of information. These areas of common ground are consistent with previously documented shared concerns about habitat loss (Reiger 2001) and preferences among natural resource management agencies for educational strategies (Mortenson and Krannich 2001). Although these elements were not strongly linked

logically across the three domains of our analysis (problems, solutions, and facts), they all constituted potential opportunities to cultivate common interests rooted in shared perspectives among those who participated in the Mt. Elden and Sabino Canyon incidents.

Outcomes and effects

Our results and a detailed reading of newspaper articles make clear that the Mt. Elden and Sabino Canyon incidents triggered anxiety among many people, including wildlife and land management agency personnel and wildlife agency commissioners. Their public discourse was both defensive of the status quo and critical of those who questioned it. Compared with the Mt. Elden incident, the Sabino Canyon incident seemed to elicit stronger responses among those affiliated with the agencies, plausibly because appointed and elected political officials were more prominently involved as allies of environmentalists and animal protection advocates and because a national environmental organization headquartered in Tucson (Center for Biological Diversity) was also a participant. A few state senators and representatives from Tucson actively questioned the methods and procedures of the state wildlife agency. Perhaps most important, the governor at that time, Janet Napolitano, publicly expressed lack of confidence in the agency and even suggested that different institutional arrangements might be needed to remedy purported shortcomings, especially in the agency's capacity to inform and involve diverse stakeholders (Perry and DeVos 2005). This unprecedented active involvement of Arizona political elites in a cougar management issue was vivid evidence of successful issue expansion, primarily by those identified with the power-focused narrative of agency reform and cougar protection.

The threat to agency prerogatives posed by the Sabino Canyon incident led to a significant agency response. In the short term, they stepped back from their firm intentions to kill cougars that were suspected of posing a threat. They did end up removing three cougars in or immediately adjacent to the canyon, one to a zoo and the other two killed in the field (Perry and DeVos 2005), but these actions were in response to situations that more unambiguously required a decisive field response to an immediate threat (to school children and investigating officers) rather than a decisive policy response to a debatable threat. Longer term, the agency responded by convening a series of three facilitated workshops in Tucson, Phoenix, and Flagstaff to engage a wide range of stakeholders in developing a protocol for guiding the agency's response to future human safety incidents (Arizona Game and Fish Department 2004a, b). These workshops were considered a success by most of those involved, although the standards of appraisal were largely tacit (Perry and DeVos 2005). Most participants remarked on the level of agreement among people with varying perspectives and the extent to which people "felt good" about the workshops (Arizona Game and Fish Department 2004a, b).

In the short term, the workshops addressed some of the key demands made by environmentalists, animal welfare advocates, and their political allies. In particular, the workshops provided standing and voice in an authoritative venue for non-traditional, non-consumptive stakeholders. On its face, this temporarily allayed the disenfranchisement of those with biocentric views and interests. We suspect that this temporary granting of power and respect alleviated the deprivations felt by a historically marginalized set of stakeholders. Longer term, the workshops and the resulting protocol (Arizona Game and Fish Department 2005) predictably helped to stabilize people's expectations regarding future agency actions among most of those who had a stake in cougar management, which is highly significant from a policy standpoint (Lasswell and McDougal 1992).

What the agencies learned

Perry and DeVos (2005) provided valuable insight into the narrative constructed by agency personnel to understand the Sabino Canyon incident, which is closely linked to what those with formal power learned, which matters to those who are interested in drivers of policy change (Sabatier 1988). To recap their lessons, they attributed the controversy largely to agitation by "extremist" groups and misrepresentation of factual matters by those groups as well as by the newspapers. They featured the uncivil and illegal activities of environmentalist activists. They also considered ignorance among the urban public about the genuine risks posed by cougars to be a contributing factor as well as the extent to which the state's vulnerability to litigation led the wildlife agency to minimize the risks of cougars to people. They interpreted the workshops following the Sabino Canyon incident primarily as affirmation of agency policies and practices. Their principal recommendation was to initiate field research focused on cougars using the urban–wildlife interface and to develop better public relations strategies with the intent of achieving better control over intelligence and promotion activities during future incidents.

Our results suggest that Perry and DeVos overlooked several important conditioning factors and dynamics. They did not discuss or otherwise recognize the potential relationship of these incidents to the exclusive nature of state-level wildlife management, which is an important context (Mattson and Clark 2010a). Biocentric stakeholders were almost certainly using these incidents to give voice to their feelings of disenfranchisement from a management system that primarily served the interests of hunters and depended heavily on killing animals as a management tool (Mattson and Clark 2010a). By all appearances, these incidents were catalyzed by inequitable power arrangements, disparate worldviews, and related different preferences for lethal versus non-lethal methods of management. Moreover, much of the discourses was about who should be responsible and accountable, with implications for how authority and control (i.e., power) should be allocated. Unlike Perry and DeVos, we found little evidence that ignorance or misinformation, as such, explained much of the discourse content and dynamics, although all sides were apparently selectively offering "factual" information that was consistent with their perspectives and interests, which is a common pattern (Pielke 2007).

One of the most striking elements missing from Perry and DeVos's appraisal was recognition of those who constituted the figurative middle ground. A large number of people participated in the discourses. These were not incidents constructed wholly around the strident voices of a handful of policy entrepreneurs. In fact, the majority of participants voiced a middle ground perspective that placed responsibility and accountability for cougar–human conflict, not on the cougars and the agencies who proposed to kill them, but on the people who chose to live and recreate in cougar range. Nowhere do Perry and DeVos recognize this commonly expressed perspective other than, perhaps, in noting the lack of public support for lethal methods. In any case, of the many people with biocentric leanings who objected to agency management, only a few engaged in the extreme behaviors featured by Perry and DeVos.

Conclusions

The Mt. Elden and Sabino Canyon incidents were marked by a pronounced increase in references to cougars plausibly fueled by a synergism of increased media attention, crystallization of opinions, and resulting increased salience. Compared with background

periods, these incidents were tacitly focused more on contesting and debating power: Who should have authority and control over what matters, and who should be accountable for what outcomes? These debates over power took place largely through the lenses of problem definition and solution advocacy, backed by selective uses of information. The debates were shaped by discourse coalitions consisting of participants with different identities. The greatest conflict was contained in discourses voiced, on the one hand, by those with direct or indirect access to power and aligned with state wildlife management agencies, and by those, on the other hand, who were disenfranchised and seeking power. Key differences in the discourses could be understood as expressions of different beliefs regarding the ethics and other merits of killing wildlife and the extent to which people should be held accountable for choices that result in human–wildlife conflicts.

The dynamics of these incidents are consistent with our prior expectation that those who are currently marginalized by state-level wildlife management and who hold biocentric views used the incidents as a way to disorder the current arrangements and gain some measure of access to authoritative decision making (Mattson and Clark 2010a). But these incidents also brought into relief latent and less coherent discontent among the broader public about fundamental premises of wildlife management, in particular the centrality of killing to defining and solving problems, which is consistent with the misalignment found by Teel et al. (2005) between public preferences and current wildlife management arrangements. Although the state wildlife management agency involved in both incidents did temporarily involve non-traditional stakeholders in an authoritative process in the aftermath of the Sabino Canyon incident, the agency apparently did not learn key lessons, as indicated by Arizona Game and Fish Department (2004a, b) and Perry and deVos (2005). Most important, agency personnel expressed little or no recognition of the potential roles of other worldviews and inequitable power arrangements in triggering these incidents. Nor did they explicitly recognize the related potential for preventing future incidents by authoritatively involving currently disenfranchised, non-traditional stakeholders in wildlife management policy processes (cf. Wondolleck and Yaffee 2000). This broadening of participation matters, for pragmatic reasons as well as reasons of principle (Lasswell and McDougal 1992; Urbinati 2006).

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