
Changing Attitudes toward California's Cougars

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The management of California's cougar population has been an ongoing focus of public debate. Over the course of this century, this predator's legal status has changed several times, and in 1990 voters approved the California Wilderness Protection Act, which outlawed the sport hunting of cougars. Since that time, rising rates of human-cougar interactions have generated extensive media coverage of human-cougar conflicts and management policies, scientific controversies about the ecology of the cougar population, and political action to reinstate sport hunting. This paper considers one major institution which both shapes and reflects attitudes toward wildlife and related management issues: the print media. Through a content analysis of cougar-related coverage appearing in the Los Angeles Times, we document how attitudes toward cougars shifted between 1985 and 1995 as reflected in the tenor of coverage, specific attitudes expressed, and the terminology used to describe cougars. We conclude that such analysis of public discourse around wildlife management issues is a useful method of tracking broad shifts both in public attitudes toward wildlife and in the positions on wildlife issues of major institutions which influence those attitudes.

It has become an axiom of sound wildlife management practice to consider human attitudes toward wildlife and wildlife habitats, in order to pave the way for smooth implementation and reduce the risk of unanticipated political strife over management plans (Adams, Dove, & Leedy, 1984; O'Donnell & Van Druff, 1987; McAninch & Parker, 1991; Curtis & Richmond, 1992). For example, in a study of

residential attitudes in Long Island, New York toward a neighboring deer population, Decker and Gavin (1987) found that despite a significant level of deer/human conflict, residents retained positive attitudes toward deer and maintained negative attitudes toward hunting as a way to manage the deer population. A variety of similar cases have led wildlife managers to consider public attitudes both as key ingredients of specific wildlife management plans and as important influences on legislative or financial support for management activities (Penland, 1987; Bath, 1991; Bath & Buchanan, 1989; Donnelly & Vaske, 1995).

The need to understand human attitudes toward animals has generated scholarly research into the process and determinants of attitude formation. Such research, conducted primarily by sociologists and psychologists, suggests that personal and contextual characteristics of individuals influence the nature of their environmental values, ideas about appropriate human-animal relations, and the extent of knowledge and experience with various types of animals, all of which shape attitudes toward them (Kellert & Berry, 1980; Kellert, 1996). Relevant characteristics/contexts include culture, religion, gender, education, and urban or rural background. In addition, the characteristics and behaviors of any particular animal in question can also shape attitudes. Of particular importance here are features that include attractiveness, intelligence, size, predatory nature, skin/fur texture and morphological structure, and locomotion characteristics (e.g., flying, walking, etc.); phylogenetic proximity to human beings; likelihood of inflicting property damage, and economic value; cultural and historical importance (such as endangered status); and the animal's traditional relationship to human society (e.g., as pet, game animal, pest, native vs. exotic species).

Research on attitudes has less frequently focused on the ways in which individual attitudes toward animals may be affected by dynamics at the societal and institutional levels as expressed in public discourse about animals, the management problems they present for humans, their ecological and economic roles, and their rights. There are many sites of such public discourse, including the media, popular writing about animals, public policy controversies around specific issues or species, and national/international debates around endangered species, habitat protection, and wildlife reserve creation. As the mix of attitudes shifts in response to (for example) episodic events, new scientific understandings, or policy moves, and thereby generates political action, public discourse itself is affected and attitudes toward animals change, in an iterative cycle.

In this study, we consider one major institution which both shapes and reflects attitudes toward animals, the print media, and one particular wild animal, the

charismatic predator *Felis concolor* (cougar or mountain lion). Specifically, our purpose is to document how coverage of cougar-related issues in southern California's major newspaper shifted between 1985 and 1995. How, if at all, did newspaper coverage reflect growing public concern and policy debates? Did the tenor of coverage and the mix of attitudes toward cougars expressed in that coverage shift? If so, how?

The article is divided into three sections. First, we provide background on cougar management policy in California as it has evolved since the early years of the 20th century. Here, we highlight human-cougar interaction patterns, scientific controversies over cougar population dynamics and ecology, and the political struggles that emerged around cougar management. Next, we outline our framework for analyzing media-based attitudes and present results from a content analysis of cougar coverage in the *Los Angeles Times* printed between 1985 and 1995, a period of shifting public policy and controversy surrounding cougar management. Last, we discuss the implications of our results for understanding how public attitudes toward animals arise and change over time.

Debates over California Cougar Management Policy

The cougar's status has been a subject of debate in California for years, both within the legal system and among various groups who either support or oppose the protection of cougars from sport hunting or other means of population reduction. Over the past decade these debates have resurfaced, fueled by concern for cougar protection and habitat conservation, rising rates of human-cougar interaction, lack of scientific consensus about optimal cougar population levels, and political struggles between environmentalists and the hunting lobby. They reached a crescendo in 1996, when the state's voters were asked to decide whether sport hunting of cougars would again be permitted in California.

Human-Cougar Interactions

Human-cougar interactions are relatively rare, and the threat to human safety posed by cougars is low. In fact, in the United States far more people die each year from bees (40), dogs (18-20), rattlesnakes (12) and black widow spiders (3) than from cougars (Weiss, 1990). Nevertheless, the numbers of reported lion sightings rose rapidly after 1990 (Gibbons, 1995), and there have been more attacks against humans in the last 20 years than there have been in the 80 years prior (Beier, 1991). Within the past 10 years there have been a dozen non-fatal cougar attacks on

humans in the United States, 7 of which occurred in California (Table 1). There also have been 4 fatal attacks, 2 occurring in California.

Table 1. Cougar Attacks on People in California

<i>Date</i>	<i>Gender</i>	<i>Age</i>	<i>County</i>	<i>Reference</i>
NON-FATAL				
1986, March	Female	5	Orange	Beier, 1991; F&G, 1995*
1986, October	Male	6	Orange	Beier, 1991; F&G, 1995
1992, March	Male	9	Santa Barbara	F&G, 1995
1993, September	Female	10	San Diego	F&G, 1995
1994, August	Male	50's	Mendocino	F&G, 1995
1994, August	Female	50's	Mendocino	F&G, 1995
1995, March	Male	27	Los Angeles	F&G, 1995
FATAL				
1994, April	Female	40	El Dorado	F&G, 1995
1994, December	Female	56	San Diego	F&G, 1995

* California Department of Fish and Game 1995. This list does not include encounters between cougars and humans not resulting in an attack (e.g., stalkings).

The first fatal attack occurred in April 1994, when the remains of a 40-year-old jogger were found in a State Recreation Area in El Dorado County near Sacramento. Then, in December, a 56-year-old woman was attacked and killed while hiking at Cuyamaca Rancho State Park near San Diego. In addition to rising rates of human-cougar interactions, there is some evidence that actual depredation on pets and livestock has increased. Whereas only five depredation permits (allowing a mountain lion to be killed after its depredation has been established) were issued in 1971, permits granted steadily climbed to 51 in 1979, 135 in 1985, and continued to rise to 192 in 1993 (California Department of Fish and Game, 1995).

Controversies over Cougar Population and Ecology

Wildlife management decisions often hinge on official population estimates. In the case of cougars, estimating populations is extremely difficult because of their elusive behavior, vast range sizes in California, and difficulties in using traditional

wildlife population estimation techniques (such as mark/recapture) on such large and potentially dangerous animals. Thus, not surprisingly, estimates developed by California Department of Fish and Game ecologists were hotly contested and fueled debates over cougar management tactics. An estimate by the Department of Fish and Game published in the early 70s placed the number at 2,400 (Sitton, 1973). More recent Fish and Game estimates placed cougar numbers between 4,100 and 5,700 in the mid-80s (California Department of Fish and Game, 1984), and by the mid 90s, between 4,000 and 6,000 (California Department of Fish and Game, 1995), suggesting that the population had rebounded. Other evidence offered by the Department in support of this trend included increased cougar sightings, numbers of depredation permits issued, and rates of bighorn sheep depredation in selected areas (Gibbons, 1995).

In the early 90s these numbers were held up by ranchers and residents, who blamed the upsurge in the cougar population for behavioral change, i.e. a growing boldness on the part of the lions, and their venturing into suburban neighborhoods in search of food. Hunters blamed growing deer mortality on excessive cougar predation, citing population pressures. They argued that depredatory permits were not adequately addressing the perceived problem of increased cougar interactions, and that cougar hunting would instead be a more effective method of population management. Although Department of Fish and Game officials admitted that recreational hunting would not lower cougar numbers sufficiently to reduce perceived threats to humans significantly, they were generally supportive of hunting as one of several management tools (Gibbons, 1995); as the Department's top lion biologist stated, "I believe that in certain situations we need to hunt lions to protect property and lives" (Mansfield, 1986).

Some cougar ecologists outside the Department of Fish and Game, however, rejected the proposition that hunting would cause cougar attacks to decline, citing a lack of empirical evidence (Beier, 1991). They argued instead that the hypothesis of increased cougar aggressiveness due to population pressures was based on unreliable methods for counting the animals. Smallwood (1994), for example, argued that estimates regarding the population were inaccurate because they were inferred from home range studies and anecdotal evidence, and unreliable because the evidence came through increased access and encroachment into lion habitats by humans and domestic animals, which made lions more visible. Moreover, ecologists argued that these estimates were based on extrapolation from cougar density figures developed in a small number of intensively studied areas in the state, and assumed a unified population of cougars (rather than subpopulations with separate dynamics). In fact, different methods of enumeration produced very different

results, although each approach was considered reliable for estimating long-term population shifts (Beier & Cunningham, 1996). For example, by counting tracks on a series of cross-state transects, Smallwood and Wilcox (1996) estimated that the lion population declined during the 80s. Although not uncontroversial, such estimates called official Department of Fish and Game population figures seriously into question.

Ecologists also suggested that an increase in interactions and predatory incidents was more likely to be a result of regional rates of habitat loss and fragmentation (Beier, 1993). They argued for management decisions based on regional-scale population dynamics, and which accounted for the felines' transient nature and their requirement for dispersal avenues or movement corridors to allow new home range establishment (Ricklefs, 1987; Taylor, 1991; Smallwood, 1994; Hopkins, 1996). The solution, according to these ecologists, was not hunting but rather the speedy public acquisition of critical corridor lands to reduce the impacts of urbanization-led fragmentation.

History and Politics of Cougar Management Policy

Historically, cougar encounters in California primarily involved livestock, leading to the establishment of cougar bounties in 1907, but the animal has since been reclassified several times. In 1963, the cougar's status was changed from an animal whose elimination was encouraged to a "non-protected mammal;" in 1967, cougar hunting remained allowed but bounties were eliminated. In 1969, the cougar's status was altered again to "big game mammal" which provided a level of protection by regulating hunting seasons and creating a bag limit.

Historical estimates suggest that over 12,500 lions were killed by bounty and sport hunters between the turn of the century and the early 70s (Mansfield & Weaver, 1989; California Wildlife Protection Coalition, 1996). As noted above, the estimated number of cougars in the state was then believed to be about 2,400 (Sitton, 1973), and growing public concern for protection of California's cougar population was voiced, prompting the passing of Assembly Bill 660. This bill mandated an investigation into the state's cougar population, and changed the status of the cougar one more time from "game" animal to protected "nongame" animal. A four-year moratorium which banned cougar hunting was enacted in 1972, and was later extended until January 1, 1986. At that point, the bill's reauthorization was vetoed by then-Governor George Deukmejian. This veto would have returned the cougar to its former game mammal status had it not been for the postponement of the 1986 hunting season by the Fish and Game Commis-

sion, due to expressions of public concern for cougar welfare. The Department of Fish and Game was requested to determine potential effects from hunting on California's cougar population more clearly. In response, an earlier mountain lion status report was updated, which endorsed hunting in Northern California for the 1987 season. But this recommendation was challenged in court; finding fault with technical aspects of the report, the Judiciary upheld the 1972 ban, thus prohibiting the Department of Fish and Game from issuing hunting permits for the 1987, 1988 and 1989 hunting seasons.

In June 1990, cougar protection activists, led by the Mountain Lion Foundation, succeeded in putting Proposition 117 (also known as the California Wildlife Protection Act) on the California ballot. This initiative was narrowly approved by voters (52% to 48%), bringing back protectionary status for the cougar. Lions could still be killed if they were found to pose a threat to people or property, however. The Act also allocated \$30 million annually to protect and enhance wildlife habitat through the year 2020. One-third of these funds are earmarked to protect critical cougar and cougar prey (e.g. deer) habitat, leaving the remaining funds for the purchase of rare and endangered species habitat, wetlands, and riparian and aquatic habitat.

By late 1994 and early 1995, however, four bills had been introduced into the state legislature to alter the California Wildlife Protection Act. In various measure, these bills constituted responses, primarily by the hunter lobby, to the rising incidence of encounters with and attacks by cougars, but also, to a lesser extent, by environmental groups trying forestall the hunter lobby. Senate Bill 28, which proposed changing the voting requirement in the legislature in order to make changes to Proposition 117 and legalize mountain lion hunting, was eventually passed and in 1996 went to the voters of California in the state-wide referendum under the name of Proposition 197.

Analyzing Media Coverage of the Cougar Controversy

As a source of information and opinion, media texts are critical in shaping public attitudes toward animals. The study of newspaper coverage allows attitudes to be traced over time, since articles reflect moods, experiences and concerns through continuous publication on a regular basis, and are seen by a sizable share of the general public. In turn, however, the media itself reflects the changing nature of these public attitudes and concerns.

This dialectical role of the media is emphasized by Gans (1980), McQuail (1987), Burgess (1990), Lorimer (1994) and others who analyze the media from a

cultural indicators or interaction perspective. The media is seen as both molding popular attitudes and, to an important degree, simultaneously reflecting those views. McQuail (1987), for example, reports that “the media may equally be considered to mould, mirror and follow social change” (p. 96) and so “both changes and regularities in media content reliably report some feature of the social reality of the moment” (p. 178). Similarly, Lorimer (1994) argues that the “lived reality of the individual, group, and the culture interact with media realities and with one another through a constant process of mutual selection, re-stylization (or appropriation), transformation and re-display” (p. 160). In the case of local news in particular, the audience is seen to shape the nature of media production (p. 37), as the social characteristics (race, class, gender, urban versus rural residence, etc.) of audiences influence media output (Burgess, 1990).

Thus, on the one hand, journalists shape news through story selection and story emphasis, making decisions on the basis of commercial, professional, and audience considerations. In doing so, they influence the information available to consumers and often delimit the range of debate on given issues. On the other hand, the attitudes of journalists (like those of consumers) arise as a result of commonly experienced social forces, so their reportage necessarily reflects the spectrum of socially prevalent attitudes. Analysis of coverage can thus reveal how public attitudes are dynamically shaped by the media, but also how underlying attitudes are changing as well.

Drawing on these precepts about the role of the media, our inquiry examined the coverage of cougars by the *Los Angeles Times*, the most widely circulated paper in southern California, over the past 10 years (January 1, 1985 to April 30, 1995). During this period, the *Times* printed a total of 79 cougar-related articles which we consider likely best to reflect patterns of attitudinal change in the public at large, as well as play a major role in shaping attitudes and their dynamic shifts over time. Letters to the Editor were included, as these letters are selected by journalists according to similar criteria as story choice, or through a desire to demonstrate their broad perspectives. We performed a content analysis, organized around eight categories, to create an attitudinal data base. These categories were:

- *date of print*;
- *location in newspaper* (e.g., front page of first section, front page of second section, etc.);
- *type of article* (i.e., editorial, letter to editor, or general news);
- two most heavily emphasized *substantive topics* discussed in any one article

(i.e., while many topics are often discussed, the two that were most central to the articles were identified)

- *descriptive terminology* for cougars;
- *identity of spokesperson(s)* quoted in article;
- *attitudes* expressed in the article; and
- overall *tone* of article (positive/supportive, negative/oppositional, or neutral).

Six of these eight categories are quantitatively measurable, but two categories, the overriding *tone* and specific *attitudes* expressed in the articles, must be qualitatively assessed.²

Articles can present many sides of a controversy, but one side tends to be more heavily represented than another. The overriding tones of articles typically outweigh conflicting undertones, and leave more lasting impressions with the reader. We characterized the tone of an article as either positive/supportive of cougar protection, negative/oppositional, or neutral. Articles were defined as negative or oppositional articles if they focused attention on cougars as a disruption or threat to society. In contrast, articles were defined as positive or supportive if they emphasized cougars as a valued part of nature, to be conserved and protected. In order to determine the predominant tone of each article, a combination of the following indicators was examined:

- specific *attitudes* presented, which were diverse (see below for a description of attitudes considered) but typically reflected either supportive or non-supportive perspectives;
- *terminology* used (e.g., an article conveyed a negative tone if the author used phrases such as “savagely dragged”, “stealthily stalked”, or “ruthlessly mauled” to describe a lion’s actions, or described a lion as a “lean, mean killing machine”);
- *illustrations/photographs* (e.g., a picture of an owner holding a dead tracked lion who had preyed on his dog was viewed as portraying a negative tone);
- *informational bias* (e.g., an article was considered more positive if an author used data to highlight the rarity of lion attacks as opposed to the number of human deaths caused by these rare events).

In addition to tone, a variety of more specific attitudes toward animals were typically expressed in cougar coverage. We used Kellert’s typology of attitudes

towards animals to guide our analysis of individual statements made in the coverage (Table 2). These attitudes range from seeing animals as resources for human use and/or domination (for example, utilitarianism and dominionism), to attitudes emphasizing kindness toward animals and their ethical treatment (such as humanism and moralism), to those focusing on the animals as objects of scientific study (scientism) or components of the ecology (ecologism). Some attitudinal dimensions reflect the absence of any interest in or concern for animals or negative sentiments toward animals (neutralistic or negativistic attitudes). In our analysis, phrases extracted from our dataset on cougar coverage were coded according to their correspondence with one of these specific attitudinal dimensions.

Our analysis, presented below, highlights the *tenor* of coverage, which refers to its tone, content, prominence, and differences between reportage and editorial coverage; the specific mix of *attitudes* expressed in coverage; terminology used to describe cougar *character*; and the *changes* in tenor, attitudes and terminology over the study period.

Table 2. Attitudes Toward Animals
(After Kellert & Berry, 1980)

<i>Aesthetic</i>	Interest in artistic and symbolic characteristics of animals
<i>Dominionistic</i>	Interest in mastery/control of animals, typically in sporting situations
<i>Ecologistic</i>	Concern for environment as system, interrelationships between wildlife species/natural habitats
<i>Humanistic</i>	Interest and strong affection for individual animals (pets); focus on large animals with common anthropomorphic associations (wildlife)
<i>Moralistic</i>	Concern for right/wrong treatment of animals, with strong opposition to exploitation/cruelty towards animals
<i>Naturalistic</i>	Interest and affection for wildlife and the outdoors
<i>Negativistic</i>	Orientation of dislike or fear of animals
<i>Neutralistic</i>	Orientation of neutrality toward and emotional detachment from animals
<i>Scientific</i>	Interest in the physical attributes and biological functioning of animals
<i>Utilitarian</i>	Primary concern for practical and material value of animals or animal's habitat

The Tenor of Cougar Coverage

Of the 79 articles on cougars, the *tone of coverage* of 34 (43%) was supportive, 28 (36%) was negative, and 17 (22%) was neutral. The distribution of articles by tone category by year is shown below in Table 3.

Table 3. Tone of Articles in the Past Decade

Date	Negative	Supportive	Neutral	Frequency	Percent
1985	1	2	0	3	4%
1986	4	3	1	8	10%
1987	2	8	6	16	20%
1988	0	5	1	6	8%
1989	0	4	0	4	5%
1990	1	1	1	3	4%
1991	4	0	3	7	9%
1992	3	1	1	5	6%
1993	2	2	0	4	5%
1994	5	1	3	9	11%
Up to 30 Apr 1995	6	7	1	14	18%
Total Frequency	28	34	17	79	
Total Percent	35%	43%	22%		100%

With regard to *content of coverage*, respect for cougars and cougar behavior was the hallmark of supportive articles, and was expressed in more than half the articles. Loss of habitat was blamed for rising rates of cougar encounters; in fact, this was a recurring theme in seven of the articles. For example, ecologist Beier's statement set the tone of one of these articles: "When you look at a map and see how much habitat they [cougars] require, and how much habitat, even in just the last four years, has been lost – basically, when the humans move in, they move out. I'm surprised they are as well behaved as they are" (Needham, 1992).

Of the 34 supportive articles, 18 (53%) expressed direct concern for the safety of cougars, while 25 (74%) responded to proposed changes in legislation to permit cougar hunting. Many articles also expressed fears about the potential for cougar extinction, often using grizzly bear extinction and the endangered status of the California condor as cautionary examples. Some articles denied that cougars were

a threat to humans, as did one article in which a pro-cougar ecologist argued that "... cougars are no more dangerous to humans than breathing the Southern California air" (Johnson, 1993).

Anti-hunting sentiments were voiced in over 70% of supportive articles. These sentiments were expressed by condemning the sport of cougar hunting as inhumane, and by making the argument that hunting would not reduce conflicts between people and cougars. The former argument was asserted in a Letter to the Editor, which claimed that "Trophy hunting is the most blatantly arrogant and vicious type of animal killing; it's done for the pure blood-lust fun of it all" (Pearson, 1987). This sort of anti-hunting rationale was also graphically captured in a comment made in an animal advocate's Letter to the Editor: "The resumption of the bloody sport in which lions are being chased and traumatized by a noisy pack of hounds and treed when trying to elude the pursuers, then are subsequently shot, is repulsive to most civilized individuals" (Brooks, 1986). The argument that hunting would not reduce human-cougar conflict was nicely summed up by a naturalist for the state Department of Parks and Recreation who stated, "We're not going to save sheep, cattle, deer or little girls and French poodles by opening up a hunting season on mountain lions" (Cooley, 1986).

More than one-third of all articles (28, or 35%) had a negative tone. In such coverage, cougars were typically portrayed as a disruption to urban life, a nuisance to society, or a threat to humans. Not surprisingly, the strongest theme of the negative articles was the cougar's threat to human safety, including that of children, residents, and park users. This concern was expressed in three-quarters of the negative articles and nearly all included descriptions of cougar incidents and attacks. These often opened with dramatic details of an attack, for example, "A mountain lion sprang from a bush and badly mauled a five-year-old El Toro girl...." (Lindgren, 1986).

Attacks involving people or domestic animals and cougars were most frequently explained on the basis of increased populations of people and cougars, and development pressure resulting in loss of habitat. Negative articles received more visible coverage both in terms of placement within the paper and scope of associated illustrative visual coverage.

Support for hunting was the second most common theme echoed in the 28 negative/oppositional articles. This sentiment was reflected in criticisms raised against the 1972 hunting moratorium, attacks on Proposition 117, and in comments made in favor of open hunting seasons for cougars. Usually, such articles explicitly supported hunting as a means of management. Some went further, blaming the

hunting ban as a reason for rising rates of encounters and attacks. As the chair of the California Sportsmen's Task Force (a bow-and-arrow hunter) argued, "When [Proposition] 117 passed, we knew there were going to be problems in the future," and predicted that "it's just a matter of time before some child is taken" (Smith, 1994). Similarly, a rancher from Eureka claimed that the mountain lions were "annihilating" the deer population and would soon move on to children: "The only thing that is going to turn [the anti-hunting movement] around is when there won't be any deer left and the lion starts coming into the city and going after children" (Dolan, 1989).

Of the 79 articles, 17 (22%) were neutral in tone. The two main themes of neutral articles were cougar legislation and management concerns (63%) and threats to human safety (44%). The most common attitudes were neutralistic (69%), and scientific (31%). Three out of eight front-page articles about cougars were neutral.

Turning to the issue of *prominence of coverage*, eight (10%) articles received front page coverage. Only one of these was supportive, while four were negative. Also, 19 photographs accompanied the negative articles, while only 5 accompanied supportive articles. Of all photographs associated with negative articles, some had clear negative connotations: two cougars killed by officials, two menacing and roaring cougars, and one dead cougar held up as a trophy by the owner of a pet the cougar had killed.

There were strong differences in the tone of *reportage versus editorial coverage* (editorials, opinion pieces and letters to the editor). Such differences are important to note, since editorials and op/ed pieces are widely read by both policy-makers and the lay public alike, while Letters to the Editor act as conduits for the expression of personal feelings and also reflect the mix of interests involved in public discourse. Of the 79 *Times* articles, 24 (30%) were editorials, op/ed pieces or Letters to the Editor, most of which focused on legislative issues or threats to cougar safety. The majority (21, or 88%), were supportive. In contrast, only 14 (18%) of the straight reportage items were positive. The authors of the editorials, op/ed pieces and letters included staff writers (10), residents (7), animal advocates (5), one legislator, and one hunter. In most instances there was congruence between the author's affiliation and position on cougar management (i.e. animal advocates supported bans on hunting); however, the one hunter, a member of the National Rifle Association, wrote in support of Proposition 117 on the basis that hunting would not prevent recurring attacks (Fleck, 1987).

Attitudes Expressed in Coverage

Scientific, dominionistic and ecologicistic attitude statements prevailed in the 79 articles examined (see Table 2). Scientism was the most common attitude expressed in individual statements, and was reflected in 16 (20%) of the articles. Such statements were especially evident in articles devoted to cougar ecology and/or using ecological data to support particular policy options. Dominionistic attitudes, on the other hand, commonly took the form of possessive statements about the need to “shepherd our resources” (Dowling, 1995) for our own interests and use, and the right and responsibility of government to control cougars through wildlife management plans. Ecologicistic attitudes were typically similar to this statement by Bill Yeates, lobbyist for the Mountain Lion Coalition: “...[H]abitats change, elevations change, you have cities right in the middle of some habitat areas, rural subdivisions, and serious grazing operations, all of which affect the area available for lions” (Weintraub, 1987).

Negativistic and neutralistic attitudes were the next most common in coverage statements, each being identified in 13 (16%) separate articles. The least common attitudes were aesthetic, naturalistic, utilitarian, and humanistic attitudes, all of which were represented in 1% or less of coverage appearing during the study period.

Given that individual statements reflecting specific attitudes were an important element in defining the tone of coverage, it is not surprising that the three most common attitudes displayed in supportive articles were ecologicistic (37%), scientific (31%), and moralistic (17%). Of negative articles, overriding attitudes were dominionism (50%) and negativism (46%) toward cougars. The predominant attitude revealed in editorials was ecologicistic (42%), and was mostly expressed by staff writers. The moralistic attitude (21%) was the second most common attitude presented in editorials, mostly articulated by residents.

Characterizing Cougar Character

Media descriptions of cougars as well as explanations of cougar behavior constitute implicit judgements about the animal’s character and “morality.” Table 4 illustrates the range of descriptive labels used in *Los Angeles Times* coverage. Supportive descriptors such as “majestic” linked cougars to aesthetic values. Others such as “a symbol of our dwindling wilderness heritage,” conjured up an Edenic, pristine nature embodied by cougars, to be preserved for future generations. These terms defined cougars as part of nature, genetically programmed to act the way they do

and thus innocent, and undeserving of harm from humans (through hunting, for instance). However, most supportive terms also objectified cougars and appropriated them as part of "our" heritage or as a resource available for human use.

Table 4. Terms Describing Cougars

Negative Terms	Positive Terms	Neutral Terms
One of nature's finest killing machines	Symbol of dwindling wilderness heritage	Animal Creature
North America's most efficient four-legged killer	Indigenous, rapidly vanishing wild creatures	Predator Mountain lion
Killer-animals	Magnificent wild creature	Panther
Serial killers	Spectacular-looking	Cat
Increasingly aggressive population of predators	Elusive and fascinating wild creature	Big cat Roamer
Prince of predators	Innocent	German-shepherd-sized lion
Lean, mean, killing machine	Majestic	Natural resource
Wayward	Beautiful	California's resource
Big troubles	Proud	Loner
Roaming like phantoms		
Wildest of the wild		
Menace		

In contrast, negative terms for cougars, such as "serial killers," tended to be graphic and alarmist, evoking images of cougars as vicious killers. Such images, linking cougars with premeditated criminal behavior, played on popular worries about rising crime and lawlessness. Thus they also sent implicit messages about how such "criminals" should be dealt with – harshly, and without pity or mercy, as suggested by one commentator who argued "In any civilization, killers aren't allowed to run loose" (Perry, 1994). More subtle negative characterizations also crept into the discussion. For example, a California Department of Fish and Game representative stated, "[Sightings]... indicate that there is a mountain lion up there that's found an easy way to find a meal. It's easier to snatch a dog than spend all

that time fighting over deer” (Riccardi, 1995). This claim implies that cougars had begun to make a conscious choice to change their historic predatory patterns and secretive lifestyle in order to feast on pets, simply because they suddenly got “lazy” and no longer wish to exert themselves in a challenging hunt. Such a characterization draws on deeply ingrained notions about the value of work, the moral laxity of those suspected of evading labor, and their status as “undeserving” of public support or protection.

Changes in Cougar Coverage over Time

Cougar coverage peaked twice, once in 1987 (when 16 items, or 20% of coverage was printed) and again in 1995 (when 14 items, or 18% of coverage appeared; see Table 3). This pattern of peaking was true for both reportage and editorial pieces. Each peak occurred during the year following high-profile cougar attacks.

There was also a distinct shift in both the tone of coverage and the mix of attitudes expressed over the study period. Between 1987 and 1995, the rate of negative articles steadily increased, especially after 1990 when 20 (71%) of all negative articles were written, paralleling the rising rate of interactions and attacks. Sixty-five percent of the supportive items appeared in the first part of the study period, between the years 1985-1989, while an ongoing debate on whether to return cougars to game mammal status was taking place, and momentum built for the passage of Proposition 117. The tone of coverage after the 1986 attacks was mostly supportive or neutral, but by 1994 and 1995, following the fatalities, the balance of coverage was more negative (11 negative items in 1994-1995, 7 supportive). Similarly, prior to 1990 scientific attitudes toward cougars were most commonly portrayed in the *Los Angeles Times*. But later, between 1991 and 1995, dominionistic attitudes came to replace the scientific disposition of earlier coverage.

Like the overall tenor of coverage, and specific mix of attitudes portrayed in that coverage, terminologies and descriptions of lions shifted over the course of the study period. Attacks were increasingly attributed to cougar “character” and changes in behavior. These changes went hand in hand with rising negativism and dominionism, calling into question the animal’s moral worthiness for continued protection by the state. As reports of cougar-human interaction rose and public fears were fanned by episodic attacks, the images of cougars as charismatic and proud wild animals at home in nature were replaced by terms conjuring danger, death, and criminal intent.

Despite the increase in negative coverage overall, the growth in expression of dominionistic attitudes, and the usage of more hostile terminology to characterize

cougars, editorial items printed in the *Los Angeles Times* remained largely supportive over the study period (although their frequency was low during the second half of the decade). Notably, editorial coverage was plentiful and supportive in 1987 and 1995, following the attack episodes. This was true of both staff-written editorial pieces and Letters to the Editor, which mainly reflected views of citizen/residents (as opposed to lobbyists or public officials). Readers were thus increasingly exposed to visible and well-illustrated negative reportage of cougar-related incidents and political struggles, while editorial opinion continued to support cougar protection.

Conclusion

Our data exemplify the dialectical role of the media in several ways. Overall, the tenor of California cougar coverage in the *Los Angeles Times* during the last decade was supportive of legal protections for the state's cougar population. The mix of attitudes in *Times* reportage and editorials on the cougar emphasized scientific attitudes, followed by dominionistic and ecologicistic attitudes. But during the 90s, as the rate of problematic cougar-human interactions rose and fears about human safety were fanned by hunting proponents and their political allies, coverage became increasingly negative, and dominionistic and negativistic attitudes came to the fore. Descriptive terminology for cougars also shifted, with terms bestowing value on cougars for their ecosystem role and as a symbol of wilderness becoming less common, and labels which pejoratively depict cougar character, such as "serial killers," becoming more frequent.

In some senses this increase in negative coverage, attitudes and terms is to be expected. Reflecting the old adage, "bad news sells," wildlife reportage often concerns problematic human-animal interactions or events (e.g., an attack), especially in higher-circulation newspapers (Corbett, 1992). Thus as human-cougar conflicts increased in number during the past decade, opportunities were created for various sides of the cougar management issue to express their opinions and attempt to influence public opinion. Those who were in some way involved in the attack (e.g., people whose pets had been killed), and who were therefore apt to have negative views, were most likely to capture newspaper coverage. But conflictual events also advantaged those aiming to use such circumstances for larger political purposes, including pro-hunter legislators and public officials, spokespeople for hunting organizations, and ranchers who wanted a resumption of legal cougar hunting. Because attacks involved threats or injuries to humans, those on other sides of the cougar management debate were inevitably put on the defensive, and

their views downplayed. This latter group included cougar advocates in the environmental and/or animal welfare communities, as well as cougar ecologists who disputed official cougar population estimates, and who emphasized the role of urbanization and habitat fragmentation in rising rates of human-cougar interactions.

In contrast to the increasingly negative trends in reportage, editorials continued to reflect the basic environmental and liberal orientation of the *Los Angeles Times*, with these pieces typically containing ecologicistic and moralistic attitudes prior to 1990, and more frequently supporting cougar protection than general interest articles. Although the number of editorial pieces declined after 1990, they remained predominantly positive in tone and typically employed terminology that emphasized the cougar's ecological value even when suggesting that more aggressive measures should be taken to deal with "problem" animals. This position remained in force during the run-up to the March 1996 vote on Proposition 197, which would have altered the California Wilderness Protection Act of 1990 to once again allow sport hunting of cougars. Prior to the election, the *Times* issued a forceful editorial urging a "No" vote on this Proposition, and again on election day recommended that Californians reject any weakening of cougar protection measures.

California voters did, in fact, reject Proposition 197. They did so by an even wider margin (58% opposed, 42% in favor) than they had adopted the earlier Proposition 117, the California Wilderness Protection Act of 1990. Were they swayed by *Times*' editorials? Or did they simply discount the increasingly negative tenor of cougar coverage? There are reasons to suspect both the influence of editorials and the discounting of negative coverage. The *Times*' recommendations on (often complex) statewide initiatives are widely referenced by voters, especially in urban areas with high subscription rates, and thus the paper's editorial stance on Proposition 197 could have influenced many voter decisions. Long-term trends in attitudes toward animals, linked to ongoing demographic and geographic changes, were also undoubtedly at play, reminding us of the importance of individual characteristics and contexts in shaping attitudes toward wildlife and wildlife policy. California's population is largely – and increasingly – urbanized. Urbanization is strongly associated with a decline in participation in recreational hunting, and the rise of anti-hunting attitudes, as well as a decline in dominionism and stronger moralistic/humanistic attitudes. Indeed, opposition to Proposition 197 came from urban, not rural, parts of the state. Moreover, popular environmentalism and animal rights thinking is especially apt to be familiar to, and influence, those most likely to vote (i.e. urban residents, whites, the more affluent, and those with

higher educational attainment). Lastly, the popularity of charismatic animals, such as the mountain lion, is well-documented. Thus, while journalists helped to fan fears about cougars and expand openings for a renewal of the cougar-hunting debate, their influence appears to have been mitigated by a variety of factors. Voters may have filtered negative "news" concerning cougar-human interactions through a relatively pro-cougar lens.

Nonetheless, the shift in the nature of *Los Angeles Times* reportage suggests that as rates of human-cougar interactions rose along with scientific debate and political controversy, the level of public concern about cougar management grew. Moreover, the focus of concern changed from preservation of cougars to protection from cougars (although the change was not sufficient to turn California voters into hunting advocates). Our analysis demonstrates this dynamic, and indicates the importance of tracking not only individual-level and contextual factors that shape public attitudes, but also attitudes toward wildlife and wildlife management issues as expressed in public discourse. It is vital to understand sites of such discourse, such as newspapers and other forms of mass communication, not only as reflections of broad attitudes but also as powerful actors which themselves have the potential to shape attitudes and wildlife policy outcomes.

Notes

1. All correspondence should be sent to Jennifer R. Wolch, Department of Geography, University of Southern California, Los Angeles, CA 90089-0255. The views expressed in this article are those of the authors and not necessarily those of the Mountains Recreation and Conservation Authority.
2. To perform this analysis, two assessors evaluated and scored a sample of articles separately, then conferred on their scores and arrived at adjustments to methods in order to ensure comparability.

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