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Attitudes Toward Wolves in the United States and Canada: A Content Analysis of the Print News Media, 1999–2008

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Several trends indicate public attitudes toward wolves and other charismatic wildlife changed during the 20th century. However, empirical studies indicate relative stability in attitudes toward wolves—at least in recent decades. We analyzed ∼30,000 evaluative expressions about wolves in U.S. and Canadian print news media over a 10-year time period (1999 to 2008), and classified each expression by type and valence (i.e., positive, negative). Results show an increase in the percentage of discourse about wolves that is negative. Additionally, discourse varied by exposure to wolves: states with new wolf populations had significantly more negative expressions per article than states and provinces with permanent wolf populations, and states in federal recovery zones that lacked wolves had more negative expressions than states outside of recovery zones. Results suggest that even the anticipated presence of wolf populations alters social discourse about the predator, which could impact attitudes toward wolves over time.

Keywords content analysis, news media, attitudes, beliefs, wolves

Constructs of Interest	Concept Coded (Valence)	Examples
Attitudes toward wolves *Direct evaluations of wolves*	Wolves are bad, detrimental (–)	Wolves are bad; evil; vicious; harmful; killing machines
	Wolves are good, beneficial (+)	Wolves good; beautiful; gentle; wise; intelligent
Beliefs about wolves *Assertions of fact about what wolves do*	Wolves negatively impact ecosystems (–)	Wolves decimate deer/elk, surplus kill, overkill
	Wolves benefit ecosystems (+)	Wolves restore nature's balance; return missing component of wilderness; cull the weak, old
	Wolves are overabundant (–)	Wolves are not endangered, threatened, imperiled; too many
	Wolves are endangered (+)	Wolves are endangered, threatened, imperiled, rare; too few
	Wolves negatively impact human activities (–)	Wolves kill livestock, pets; pose threat to humans, children
	Wolves positively impact human activities (+)	Wolves increase tourism; enjoyable to see; part of natural heritage
Judgments *Prescriptive statements about wolves or wolf management*	Wolves should be killed, controlled (–)	Wolves should be killed, controlled, managed; wolves should not be reintroduced, protected
	Wolves should be protected (+)	Wolves should be restored, reintroduced, protected; wolves should not be killed, controlled, managed

Figure 1. Conceptual map of constructs and conceptual categories (i.e., attitudes) coded in this analysis.

Table 1
State classifications for experience and recovery zone variables

Variable	States or provinces included in analysis[a]
Experience with wolves	
States/provinces with permanent wolf populations[b]	Alaska, Alberta, British Columbia, Minnesota, Ontario, Quebec
States with new wolf populations[c]	Arizona, Idaho, Montana, New Mexico, North Carolina, Wisconsin, Wyoming,
States in recovery zones that lack viable wolf populations	Illinois, Indiana, Iowa, North Dakota, Ohio, Oregon, Utah, Texas, Washington,
States/provinces without wolves	New Brunswick, remaining U.S. states
U.S national newspapers/wires	

[a]States that were missing from the analysis due to a lack of newspaper sources were Connecticut, Delaware, Hawaii, Kansas, Kentucky, Michigan, Mississippi, Montana, South Dakota and Vermont; Canadian provinces include Manitoba, Northwest Territories, Nova Scotia, Saskatchewan, and Yukon.

[b]Canadian national newspapers were included in this group due to the presence of permanent wolf populations throughout the vast majority of Canada.

[c]New wolf populations were defined as populations that had been established after the passage of the Endangered Species Act of 1973.
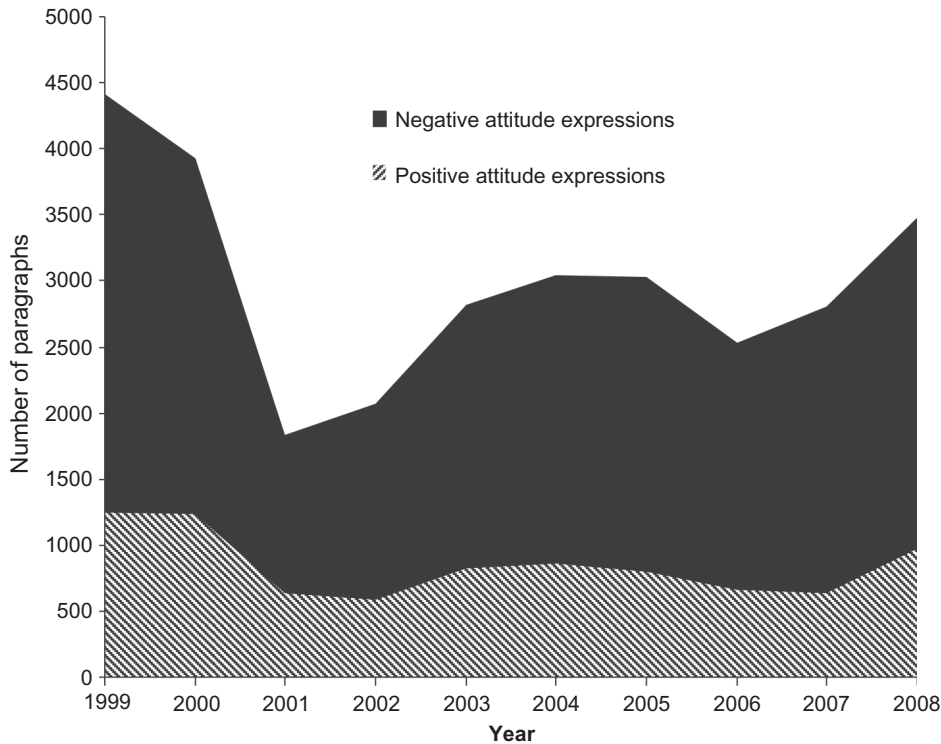
Figure 2. Positive and negative expressions (paragraphs) coded by year of publication, 1999–2008.

Table 2
Linear regression results for time trends in attitude expressions

Concept	R^2	$t\ (df = 1)$	B	Sig.
Positive Evaluations[a]				
Wolves are good, beneficial	.22	−1.51	−.10	.17
Wolves benefit ecosystems	.08	−.84	−.07	.43
Wolves are endangered	.06	.74	.09	.48
Wolves positively impact human activities	.62	−3.64	−.18*	.01
Wolves should be protected	.42	−2.39	−.45*	.04
Negative Evaluations[a]				
Wolves are bad, detrimental	.04	.57	.02	.59
Wolves negatively impact ecosystems	.39	2.27	.17*	.05
Wolves are overabundant	.05	.66	.09	.53
Wolves negatively impact humans	.02	−.39	−.19	.71
Wolves should be killed, controlled	.30	1.83	.64	.10
Summary: Total % of negative expressions	*.44*	*2.50*	*.72**	*.04*

[a]Trends were determined by calculating the percentage of paragraphs per year accounted for by each concept, and fitting a line through the 10-year trend. Thus, B-values can be interpreted as percentage point change per year over the 10-year time frame.
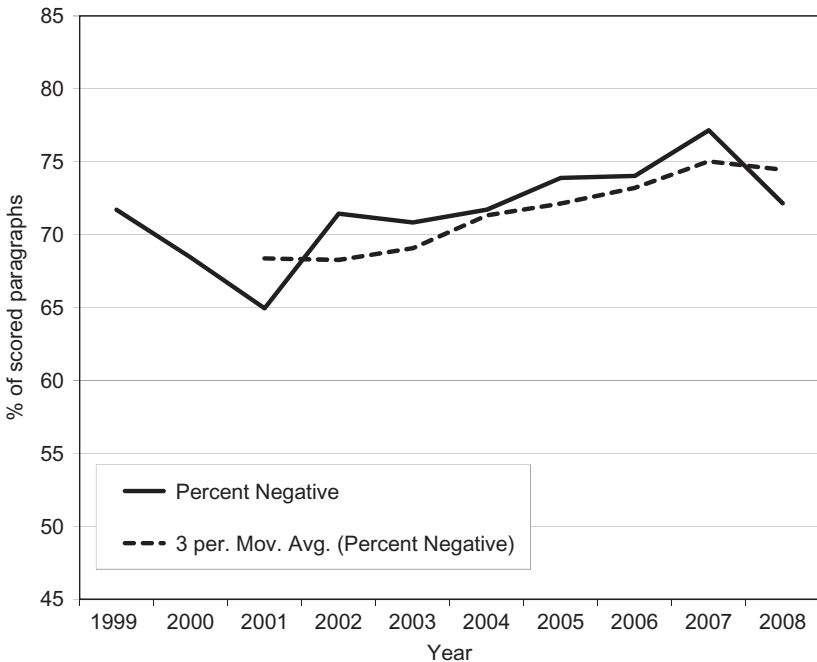
*$p < .05$.

Figure 3. Percentage of negative expressions about wolves in the news media, 1999–2008.

Table 3
Attitude expressions per article by region/experience with wolves

Experience level (region)	N (stories)	Negative expressions		Positive expressions	
		Mean	SE	Mean	SE
States/provinces without wolves	858	2.31	0.09	1.59[a]	0.06
States/provinces with permanent wolf populations	812	3.49[a]	0.12	1.37[bc]	0.05
States in recovery zones that lack viable wolf populations	868	3.52[a]	0.11	1.48[ab]	0.05
U.S. national newspapers/wires	2681	3.61[a]	0.06	1.22[c]	0.03
States with new wolf populations	924	4.27	0.12	1.54[ab]	0.05

[a,b,c]Means that share a superscript do not differ significantly ($p > .05$) based on Tukey's b post-hoc test.