

Zoomorphy: Animal Metaphors for Human Personality

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ABSTRACT We conducted three studies on the use of nonhuman animals as metaphors (zoomorphs) for human personality characteristics. In Study 1 ($n = 51$) university students rated gender, age, and favorableness of 36 mammal names when applied metaphorically to a person. In Study 2, we searched 14 dictionaries of colloquial English and three dictionaries of animal phrases to locate zoomorphic use of these 36 animal species in describing human personality. In Study 3 ($n = 28$), students rated zoomorphic use of non-mammalian species. Most animal metaphors for human personality are uncomplimentary, reinforcing the perceived distance between humans and nonhuman animal species. Zoomorphs tend to be male and refer to healthy adult individuals, with little usage referring to disability or infirmity. There is greater zoomorphy for mammal names than for bird, insect or fish names.

Keywords: animal metaphor, animal personality, zoomorphy



Animals occur repeatedly in human speech and idiom, conveying a multiplicity of feelings, thoughts, and fantasies (Kellert 1997). According to Lawrence (1993), the human need for metaphoric expression finds its greatest fulfillment through reference to the animal kingdom. “No other realm affords such vivid expression of symbolic concepts; symbolizing through use of animals is preeminent, widespread, and enduring” (p. 301). Over the millennia, humans acquired the understanding that animals are meaningful “as elaborate metaphors and symbols, as spiritual beings, and as themselves” (Shepard 1996, p. 281). Shepard (1978) maintains that “symbolic images of animals ... enable humans to objectify qualities and traits” (p. 247). Lévi-Strauss (1968) believed that such symbolic interpretations help humans address the duality of being a part of nature, yet separate.

Metaphor goes behind the surface appearance of objects and beings to their emotional and mythic origins. It makes the listener attend to some likeness, often novel and surprising, between two or more objects

(Davidson 1978). Familiar words take on new and extended meanings when used as metaphors. This is why metaphor is a favored device of poets who strive to get beneath the cultural veneer to what Ackerman (2004) calls the hidden poetry of language. Metaphors are common in most, if not all, cultures and can evoke strong emotional responses (Nesi 1995).

Investigation of animal metaphors for human personality can identify those species most likely to be used as personality metaphors and those aspects of personality most likely to be included in animal metaphors. The absence of zoomorphs can help define those qualities that are seen as separating humans from other species, at least in folk speech. If we say that a person *is a/n* (animal name), will there be any colloquial meanings referring to traits such as honesty, openness, or neuroticism? This issue connects the study of zoomorphy with the developing field of comparative personality research (Gosling and John 1999; Gosling 2001; Capitanio 2004; Uher 2008). These researchers and others have identified personality trait domains among nonhuman species and developed the implications of this for research on human personality. Their work can explicate and extend investigation of zoomorphic usage in popular speech. Presumably those personality traits featured in zoomorphs should also be found in studies of personality traits among non-human populations. This is not to imply that folk speech cannot err in describing an industrious person as “a beaver” or referring to a human predator as “a wolf,” but cases of major discrepancy call for further research. A discrepancy may indicate a change in species perception (what at one time had been seen as a species dangerous to humans is now viewed as endangered) or reflect an actual change in species behavior due to domestication or some other factor.

The present study extends an earlier investigation of botanical metaphors for human personality (Sommer 1988). Both studies focus specifically upon metaphor (*X is a tiger*; *Y is a fox*) and exclude similes or expressions of likeness (*X eats like a horse*; *Y is strong as an ox*). The research addresses personality characteristics rather than physical attributes or demographic characteristics (e.g., referring to a tall, ill-shaped man with round shoulders as “a kangaroo” or using the term to describe a resident of Australia). We examine those animal species names most likely to be applied metaphorically to human personality characteristics in colloquial speech, the aspects of human personality they cover, and the relationship between the species names and personality dimensions. We also examine the degree to which zoomorphs are gendered, age specific, and possess generally favorable or unfavorable meanings. Respondents were students in an upper division psychology class (> 90% juniors and seniors; median age ca. 22; 75% female and 25% male) that draws students from many majors at the University of California, Davis, USA. Questionnaires were filled out anonymously and all students in the class participated.

In Study 1, students rated mammalian zoomorphs as to gender, age, and favorability. Study 2 is a systematic search of dictionaries of colloquial English for personality metaphors using animal names. We predicted that those animal species names that respondents in Study 1 were able to rate as having a specific gender, age, or degree of favorableness when applied to humans will be more likely to appear in dictionaries of colloquial speech.

Study 3 asked students to rate fish, insect, and bird names when used as personality descriptors, in terms of the person’s likely gender and age, and whether the description was complimentary or uncomplimentary. We predicted greater zoomorphy for mammal names than for fish, insect, or bird species names.

Study 1: Student Ratings of Animal Metaphors

Methods

We conducted a questionnaire study of animal metaphors in an undergraduate upper division psychology class ($n = 51$). We used a list of 36 animal species likely to be familiar to college students (see Table 1), and excluded terms for immature animals such as lamb and puppy, and gendered animal names such as bull and doe since age and gender were dependent variables. We asked each respondent:

If you heard a person described as a/n (animal name),

- a. Is this person more likely to be (male)(female)(cannot say)
- b. What is the person's age? (child)(teen)(young adult 20–29 yr)(mature adult 30–50 yr)(older adult 60+ yr)(cannot say)
- c. Is this description (complimentary)(uncomplimentary)(cannot say)

Half the class received the species list in alphabetical order (antelope-zebra) and half in reverse alphabetical order (zebra-antelope).

Results

Table 1 shows favorability ratings of zoomorphic use of 36 mammal names. Using a 70% criterion, five species names are positive when applied to humans (large cats and fox), and 11 species names are negative (pig, rat, ass, skunk, donkey, ape, snake, weasel, dog, gorilla, mole).

Table 2 shows the percentage of students rating each zoomorph as male or female. Using a 70% criterion, 13 zoomorphs were considered male and only two (cat and deer) considered female. With the exception of lion, all the male zoomorphs in this table meeting the 70% criterion are uncomplimentary, while the two female zoomorphs meeting this criterion are complimentary.

Table 3 shows the age ratings for zoomorphs in six categories (child, teen, 20–29 yr, 30–50 yr, 60+ yr, and Cannot say). Only 4% of zoomorphs were seen as applying to children. These responses amounted to 20 to 30% of the responses for three small mammals: monkey, mouse, and squirrel. The rat was not seen as childlike. Its negative connotations overshadowed the small size, darting, or chattering qualities that made other rodents metaphorically appear childlike. At the other end of the age spectrum, the few animals that even a minority of respondents (10–20%) saw as appropriate metaphors for older people tended to be large lumbering mammals like the camel, rhinoceros, or elephant, plus the sheep perhaps because its supposed docility or its light-colored pelt suggests advancing age.

Eleven percent of the zoomorphs were seen as describing teenagers, with highest frequencies for monkey, rabbit, donkey, cat, and squirrel, and with the exception of donkey, these are also small mammals. The majority of zoomorphs (54%) were seen as applying to adults aged 20 to 50 yr, with highest frequencies in this range for fox, lion, tiger, and coyote. Only 4% of species names were seen as applying to older people (age 60+ yr) with the highest percentages given to large mammals: camel, bear, rhinoceros, sheep, and elephant.

We intercorrelated the “Cannot say” scores for age, gender, and favorability. If students could assign an age, they were also likely to assign a gender ($r_{(49)} = 0.833, p < 0.01$); if students could assign an age, they were also likely to rate favorability ($r_{(49)} = 0.453, p < 0.01$); and if they could assign a gender, they could also rate favorability ($r_{(49)} = 0.553, p < 0.01$). At least within the bounds of the present study, zoomorphy tends to involve more than a single aspect of metaphorical resemblance.

Table 1. Percentage rating species zoomorph as complimentary, uncomplimentary, or “cannot say” ($n = 51$).

Species	Complimentary	Uncomplimentary	Cannot Say
Lion	90	2	8
Tiger	88	2	10
Fox	82	10	8
Jaguar	78	6	16
Leopard	70	6	24
Bear	59	24	18
Deer	57	4	39
Cat	57	20	24
Rabbit	52	18	30
Horse	46	34	20
Antelope	41	18	41
Wolf	39	37	24
Squirrel	33	25	41
Coyote	33	33	33
Zebra	29	4	67
Giraffe	28	34	38
Jackal	28	50	22
Monkey	24	50	26
Mouse	20	54	26
Sheep	20	59	22
Camel	14	43	43
Elephant	14	69	18
Caribou	12	22	67
Beaver	12	49	39
Rhinoceros	12	64	24
Gorilla	8	78	14
Dog	8	86	6
Mole	4	72	24
Weasel	4	90	6
Ape	4	94	2
Ass	2	98	0
Snake	0	90	10
Donkey	0	94	6
Skunk	0	96	4
Rat	0	98	2
Pig	0	100	0

Table 2. Percentage rating species zoomorph as male, female, or “cannot say” ($n = 51$).

Species	Predominantly Male			Species	Predominantly Female		
	Male	Female	Cannot Say		Female	Male	Cannot Say
Lion	98	0	2	Cat	96	0	4
Bear	92	2	6	Deer	70	12	18
Gorilla	90	0	10	Mouse	66	8	26
Ape	90	2	8	Sheep	57	12	31
Ass	88	0	12	Fox	51	31	18
Snake	86	4	10	Rabbit	50	20	30
Rat	84	0	16	Squirrel	49	10	41
Wolf	80	4	16	Beaver	39	27	33
Tiger	80	14	6	Giraffe	34	26	40
Weasel	78	8	14	Zebra	33	27	39
Donkey	75	0	25				
Dog	75	6	20				
Coyote	72	4	24				
Jackal	68	4	28				
Jaguar	68	14	18				
Monkey	66	0	34				
Pig	66	8	26				
Leopard	62	18	20				
Horse	56	12	32				
Rhinoceros	50	16	34				
Skunk	45	10	45				
Mole	44	6	50				
Camel	41	16	43				
Antelope	33	20	47				
Elephant	31	22	47				
Caribou	20	14	67				

Study 2: Dictionary Searches

Methods

We searched 14 general dictionaries of colloquial English for all metaphors for human personality for the 36 mammalian species used in the student ratings. We also checked personality metaphors for the generic terms, *animal* and *beast*, and animal metaphors for *human* and *person*. The dictionaries were published between 1811 and 1998:

Ayto, J. 1998. *The Oxford Dictionary of Slang*. London: Oxford University Press.

Cromie, R. 1971. 1811. *Dictionary of the Vulgar Tongue*. Chicago: Follett.

Dalzell, T. 1998. *The Slang of Sin*. Springfield, MA: Merriam-Webster.

Farmer, J. S. and Henley, W. E. 1912. *A Dictionary of Slang and Colloquial English*. London: Routledge.

Goldin, H. E. 1950. *Dictionary of American Underworld Lingo*. New York: Twayne

Holder, R. W. 1995. *A Dictionary of Euphemisms*. New York: Oxford University Press.

Hotten, J. C. 1874. *The Slang Dictionary*. London: Chatto and Windus.

Table 3. Percentage rating species zoomorph as child, teen, 20–29 yr, 30–50 yr, 60+ yr, or “cannot say” ($n = 51$).

Species	Child	Teen	20–29 yr	30–50 yr	60+ yr	Cannot Say
Antelope	4	14	24	14	6	39
Ape	2	8	45	25	4	16
Ass	0	6	65	10	0	20
Bear	2	0	24	49	14	12
Beaver	4	16	41	8	2	29
Camel	0	2	24	8	18	49
Caribou	0	6	16	6	8	65
Cat	0	20	65	2	2	12
Coyote	0	8	66	10	2	14
Deer	0	10	52	4	2	32
Dog	0	12	66	0	0	22
Donkey	0	22	32	12	2	32
Elephant	0	6	10	32	12	40
Fox	0	8	82	4	0	6
Giraffe	4	12	35	4	0	45
Gorilla	0	6	24	44	8	18
Horse	0	4	52	17	0	27
Jackal	2	14	28	22	2	32
Jaguar	0	4	58	12	0	26
Leopard	0	8	46	10	2	34
Lion	0	0	40	46	6	8
Mole	12	4	26	8	8	42
Monkey	29	37	20	0	0	14
Mouse	29	15	25	0	0	31
Pig	0	12	42	14	0	32
Rabbit	10	24	38	2	0	26
Rat	2	14	46	16	0	22
Rhinoceros	0	8	19	23	15	35
Sheep	4	18	25	12	14	27
Skunk	10	10	32	6	2	40
Snake	0	6	49	25	4	16
Squirrel	22	20	20	4	0	34
Tiger	0	4	57	25	4	10
Weasel	8	16	42	12	2	20
Wolf	0	8	45	22	4	22
Zebra	4	12	27	18	2	37

Ostler, R. 2003. *Dewdroppers, Waldos, and Slackers*. New York: Oxford

Partridge, E. 1936. *A Dictionary of Slang and Unconventional English*. London: Routledge and Kegan Paul.

Smitherman, G. 2000. *Black Talk*. Boston, MA: Houghton Mifflin.

Spears, R. A. 1982. *Slang and Euphemism*. New York: New American Library.

- Watts, P. 1977. *A Dictionary of the Old West*. New York: Knopf.
- Weingarten, J. A. 1954. *An American Dictionary of Slang*. New York: Self-published.
- Wentworth, H. and Flexner, S. B. 1960. *Dictionary of American Slang*. New York: Thomas Y. Crowell.

In addition, we searched three specialized dictionaries, restricted to animal metaphors and expressions:

- Ammer, C. 1989. *It's Raining Cats and Dogs*. New York: Paragon House.
- Lyman, D. 1994. *Dictionary of Animal Words and Phrases*. Middle Village, NY: Jonathan David.
- Palmatier, R. A. 1995. *Speaking of Animals: A Dictionary of Animal Metaphors*. Westport, CN: Greenwood Press.

We tabulated these zoomorphs separately to avoid inflating the number used in colloquial speech.

Selection Criteria for Metaphors: While it would have been possible to examine similes (strong as an ox, stubborn as a mule), this seemed to warrant a separate study. And animal names used as ethnic slurs seemed sufficiently offensive to avoid including them in our research. We also excluded animal names used as verbs or adjectives (He was cat, meaning to be drunk), and also excluded animal names applied to objects (horse for heroin), body parts (mouse as a black eye), occupation, school class, or anything other than a personality characteristic. We excluded meanings referring to personhood or gender lacking a personality dimension. However, if gender were qualified by a complimentary or uncomplimentary adjective, it was retained; for example, cat defined as "any male" was excluded but cat for a *stylish* man was included. Wolf as *predatory* male and ape as "a *strong-arm man*" had recognizable personality attributes. Animal names for occupations were rejected unless they included personality-related characteristics, as in dog for an *offensive* prison guard.

Results

General Dictionaries: When used as metaphors for human personality, the two generic terms for animal (animal and beast) had exclusively negative connotations. To refer to someone as "an animal" or "a beast" means an ugly, uncouth, unpleasant individual.

The two generic terms for *homo sapiens* (human and person) were not found to be metaphors for animal personality in any of the 14 dictionaries. People say that an animal can be *like* a human in some way (a simile) but not that an animal *is* a human or person (metaphor).

The results from the general dictionary search are summarized in Table 4. Nine species names had no colloquial metaphorical meaning for human personality characteristics in any of the dictionaries (antelope, caribou, deer, giraffe, jackal, jaguar, leopard, rhinoceros, zebra). Four animal names had metaphorical meaning for human personality characteristics in only a single colloquial dictionary (beaver, camel, elephant, weasel). Nine animal names had metaphorical meaning for human personality characteristics in six or more dictionaries (ape, ass, bear, cat, dog, mouse, pig, rat, snake).

Seventeen species were generally negative in their meaning (ape, ass, coyote, dog, donkey, gorilla, mole, monkey, pig, rabbit, rat, sheep, skunk, snake, squirrel, weasel, wolf). Five species names had mixed valence when used metaphorically. They could be compliments or pejoratives (cat, fox, horse, mouse, tiger).

Several species that were negative as metaphors, could become terms of affection through the addition of a qualifier, often a personal pronoun or diminutive. Monkey is pejorative when

Table 4. Occurrence of zoomorphs in 14 colloquial dictionaries (number of mentions).

Animal	Metaphors
Antelope	(0)
Ape	A hoodlum or strong-arm man; large ugly man. (5)
Ass	A stupid or ignorant person. (6)
Bear	First-rate person, a humdinger. A pessimist. A frugal gambler. One who sells what he doesn't own. An ugly, uncouth person. (8)
Beaver	A hard-working diligent man. (1)
Camel	A large hulking fellow. (1)
Caribou	(0)
Cat	A malicious gossip, a prostitute; a stylish man or sport; hipster. (8)
Coyote	A mean, contemptible, treacherous person. (2)
Deer	(0)
Dog	Someone disliked or ugly. An offensive prison guard; an inferior player. Can also be used playfully as a term of affection. (9)
Donkey	A blockhead or fool. (4)
Elephant	An experienced, knowing person. (1)
Fox	Sexually attractive person. A sharp, cunning fellow. (3)
Giraffe	(0)
Gorilla	A person known for his strength and lack of intellect; a hoodlum; performer of dirty work for big shots. (4)
Horse	A diligent, able student. A term of high regard and esteem. A strict disciplinarian. A stupid, rude, stubborn, contemptible person. A corrupt prison guard. (4)
Jackal	(0)
Jaguar	(0)
Leopard	(0)
Lion	Notable person, someone worth seeing. A good, aggressive player. (3)
Mole	A conspirator or spy. (2)
Monkey	A dupe or victim; a silly or frivolous person; a term of affection for small mischievous boys. A gambler who thinks he or she knows what he or she is doing but doesn't. (5)
Mouse	An informer; a girl friend, sweetheart, or wife. A harlot. (5)
Pig	A dirty, slovenly, or gluttonous person. (7)
Rabbit	A coward. A steady borrower who pays a loan shark promptly. Unskilled or novice player. (4)
Rat	A despised person; an informer. (9)
Rhinoceros	(0)
Sheep	Timid or bashful person, a simpleton. A sucker or poor player. (2)
Skunk	A mean and hateful person. (7)
Snake	One who excels in anything, esp. a diligent student; a deceitful and unprincipled person. Marijuana smoker. (5)
Squirrel	A crazed person; a reckless driver; a person seeking acceptance from a group but not accepted by them. A harlot. (5)
Tiger	A strong, virile man easily aroused to anger or passion; a good fighter, also applied to male sweethearts by their lovers. A prostitute, a parasite, a rake, a vulgarly overdressed person; a ferocious woman; riff-raff. (5)
Weasel	An informer, a sneak, one who courts superiors, an inferior man. A borrower from a loan shark who must be persuaded to pay. A crafty person without scruples. (3)
Wolf	A sexually aggressive man or woman. (5)
Zebra	(0)

applied to an adult but a term of affection for a small mischievous boy, as in “you little monkey.” Describing a person as “a dog” is uncomplimentary, but becomes affectionate when qualified as “lucky dog” or “old dog.” Only one animal name used as metaphor (monkey) in the dictionary search contained a meaning that specifically included children.

No animal name used as metaphor specifically mentioned old age, infirmity, or disability. Also, Table 4 shows no animal names to be metaphors for idealism, altruism, honesty, truthfulness, cruelty, creativeness, to name a few of those character traits *not* associated with species other than homo sapiens.

Despite an abundance of colloquial expressions for mental disorder (Szasz 1993), only one animal name (squirrel) is associated with mental disorder, and this is due less to the animal’s behavior than to the association between squirrels and nuts, the latter term having a longstanding association with mental disorder (a nut loose in its shell). Animals in the wild must be healthy in order to survive, so when animal names are used to describe humans, they refer typically to mentally healthy adults, who may be stupid or uncouth, but still in possession of their faculties.

Nine species names had been common personality descriptors in the dictionary search, in that they appeared in at least five dictionaries referring to human personality characteristics. These were considered High-Zoomorphic (High-Z) species. Another eight species were not applied to human personality characteristics in any of the dictionaries. These were considered Low-Zoomorphic (Low-Z) species. It was predicted that the respondents in Study 1 would give fewer “Cannot say” responses to the High-Z than the Low-Z species. Table 5 shows that this hypothesis was confirmed for gender, age, and favorableness. In regard to favorableness, which has the closest resemblance to a personality description, there were on average four times as many “Cannot say” responses for the Low-Z species than for the High-Z species.

Table 5. “Cannot say” rating of common and uncommon zoomorphs ($n = 51$).

Zoomorphs	Mean Number of “Cannot say” Responses		
	Gender	Age	Favorableness
Common ($n = 8$)	7.1	10.1	4.9
Uncommon ($n = 9$)	17.1	18.9	19.0
t	2.96	3.56	3.51
p	0.007	0.002	0.002

Specialized Animal Dictionaries: Listings in the three specialized dictionaries were similar to those found in the general colloquial dictionaries, although the smaller sample of dictionaries (3 compared with 14) resulted in fewer zoomorphs overall. Of the 36 species, 13 were not used with reference to human personality in any of the dictionaries (antelope, beaver, camel, caribou, deer, elephant, giraffe, horse, jaguar, leopard, rhino, squirrel, and zebra). Of the remainder, four zoomorphs were predominantly positive (cat, fox, lion, and tiger), 17 were predominantly negative (ape, ass, bear, coyote, dog, donkey, gorilla, jackal, mouse, pig, rabbit, rat, sheep, skunk, snake, weasel, and wolf), and two had mixed or indeterminate connotations (mole and monkey).

Of those personality zoomorphs specifically citing a gender, three were described as male (ape, gorilla, wolf), three were female (dog, donkey, fox), and two were mixed (cat, dog). There was no specific mention of children, old people, infirmity, or disability in these zoomorphs.

Study 3: Fish, Insect and Bird Zoomorphy

We predicted that fish, insect, and bird names would elicit a lower percentage of zoomorphs than did the mammal names rated in Study 1.

Methods

We compiled a list of eight fish, insect, and bird species (24 species in total) likely to be familiar to undergraduate students (Table 6). We omitted compound names such as *golden eagle* or *catfish*, as the first term might have unknown influence, and used a rating form similar to that of Study 1 in an undergraduate class ($n = 28$). All students in the class participated. We employed a criterion of 50% or more agreement among the respondents; for example, if 14 or more of the 28 students indicated that a person described as “a hornet” were male or of a specific age, that would be considered a zoomorph.

Table 6. Non-mammalian zoomorph specified by a majority of respondents ($n = 28$).

Species	Rating Category		
	Gender	Age	Favorableness
Shark	M	20–29	—
Whale	F	—	Negative
Dolphin	—	—	Positive
Trout	M	—	—
Bee	F	—	Positive
Mosquito	—	—	Negative
Spider	—	—	Negative
Hornet	M	—	Negative
Cockroach	M	—	Negative
Ant	—	—	Negative
Termite	—	—	Negative
Flea	—	—	Negative
Eagle	M	—	Positive
Chicken	—	—	Negative
Crow	—	—	Negative
Vulture	M	—	Negative
Pigeon	F	20–29	Negative
Hawk	M	20–29	Positive
Duck	—	—	Negative
Goose	F	—	—

Results

Table 6 lists the fish, insect, and bird species meeting the 50% criterion as zoomorphs. Of the eight fish species, *shark* and *trout* were seen as describing a male, and *whale* a female. Of the insect zoomorphs, *hornet* and *cockroach* were male, and *bee* female. Of the birds, *eagle*, *vulture*, and *hawk* indicated a male when used as a zoomorph; and *pigeon* and *goose* a female. Only shark, pigeon, and hawk had age attributes meeting the 50% criterion as a zoomorph, and all referred to young adults.

There was more agreement on favorableness than on gender or age. When fish names were applied to a person, *dolphin* was positive and *whale* negative. Of the insect names as zoomorphs, *bee* was positive and all others (*mosquito*, *spider*, *hornet*, *cockroach*, *ant*, *termite*, and *flea*) negative. When bird names were used as zoomorphs, *eagle* and *hawk* were complimentary while *chicken*, *crow*, *vulture*, *pigeon*, and *duck* were uncomplimentary.

Zoomorphy: As predicted, the number of “Cannot say” responses was significantly higher for the fish, insect, and bird names ($Mdn = 35\%$) than it had been for the mammal names ($Mdn = 25\%$) ($\chi^2_{(1)} = 10.9, n = 180, p < 0.001$). The percentage of “Cannot say” responses was significantly higher for fish zoomorphs relative to bird zoomorphs, with insect zoomorphs in an intermediate position.

Discussion

The finding that most zoomorphs are negative, and that *animal* and *beast* in particular are very uncomplimentary when applied to people, reflects the elevated position that humans assign to themselves within the animal kingdom. This is reinforced by the obverse finding that terms such as *human* and *person* are not used metaphorically to describe nonhuman animals. Despite the widespread acceptance of Darwin’s theories within the scientific community, popular speech continues to reinforce the distance that humans maintain from other animal species.

Most zoomorphs refer to healthy adults, with little mention of childhood, old age, sickness, or infirmity. This reflects the view that an infant, aged, or infirm animal in the wild is vulnerable and requires a healthy adult protector.

The absence of zoomorphs for personality qualities such as altruism, neuroticism, and cruelty is noteworthy. Analysis of zoomorphs can help to define the limits of perceived animal nature as well as those aspects of personality viewed in colloquial speech as distinctly human.

Further research is required to learn those characteristics of an animal species that give it a gender when applied to humans. A lion in nature can be male or female, but as a zoomorph, it is male. Cat is female as a zoomorph, and owners of male cats often find that strangers refer to their animals as “she.” Aversions to snakes and rats are considered innate biophobic responses (Ulrich 1993), but why are these species applied metaphorically almost exclusively to males? Although mouse is applied primarily to females, the most famous media mouse is male (Mickey).

Most bird and insect names when applied to humans are uncomplimentary; fish names don’t make good zoomorphs and in our study elicited mostly “Cannot say” ratings when applied to humans. Zoomorphs involving predatory birds (*eagle*, *hawk*, and *vulture*) are seen as male; less aggressive birds (*pigeon* and *goose*) are female. As predicted, the human bond to mammals was reflected in more zoomorphic associations than to fish, insect, and bird names.

Although animals may act like humans in comic strips and children’s films, they are not described as humans. People can be called animals but the reverse does not accord with popular speech. The latter makes it easier to display, hunt, or kill animals. Campaigns for conservation and protection must understand these deeper linkages between and among species. Further exploration should go beyond the questionnaire ratings used here and consider using the semantic differential, association methods, and qualitative and phenomenological approaches, to explore the bases of these linkages and reasons for their presence or absence.

Limitations

We did not have the space to review the extensive cross-cultural and anthropological literature on animal metaphor (e.g., Urton 1985; Fontecha and Maria 2003; Olateju 2005; Goatly 2006) or the many philosophical and semantic analyses of metaphor as a linguistic device (e.g., Ortony 1993; Goatly 1997; Cameron and Low 1999).

Participants in our studies were all American university students. Further research is needed using a wider range of samples and respondents from other nations.

As manifestations of folk speech found in many human societies, zoomorphs do not employ the technical vocabulary of modern personality theory. Further research can determine how well zoomorphic expression parallels the Five Factor (McCrae and Costa 1997) and other theory-based personality models. Investigation in more depth using techniques such as the semantic differential and association methods can unearth the basis of the zoomorphs identified in the present study.

References

- Ackerman, D. 2004. *An Alchemy of Mind*. New York: Simon and Schuster.
- Cameron, L. and Low, G. 1999. *Researching and Applying Metaphor*. Cambridge: Cambridge University Press.
- Capitanio, J. P. 2004. Personality factors between and within species. In *Macaque Societies*, 13–33, ed. B. Thierry, M. Singh and W. Kaumanns. Cambridge: Cambridge University Press.
- Davidson, D. 1978. What metaphors mean. In *On Metaphor*, 29–46, ed. S. Sacks. Chicago: University of Chicago Press.
- Fontecha, A. F. and Maria, R. 2003. Semantic derogation in animal metaphor. *Journal of Pragmatics* 35: 771–787.
- Goatly, A. 1997. *The Language of Metaphors*. London: Routledge.
- Goatly, A. 2006. Humans, animals, and metaphors. *Society & Animals* 14: 15–37.
- Gosling, S. D. 2001. From mice to men: What can we learn about personality from animal research. *Psychological Bulletin* 127: 45–86.
- Gosling, S. D. and John, O. P. 1999. Personality dimensions in non-human animals: A cross-species review. *Current Directions in Psychological Science* 8: 69–75.
- Kellert, S. R. 1997. *Kinship to Mastery*. Washington, DC: Island Press.
- Lawrence, E. 1993. The sacred bee, the filthy pig, and the bat out of hell. Animal symbolism as cognitive biophilia. In *The Biophilia Hypothesis*, 301–340, ed. S. Kellert and E. O. Wilson. Washington, DC: Island Press.
- Lévi-Strauss, C. 1968. *The Savage Mind*. Chicago: University of Chicago Press.
- McCrae, R. R. and Costa, P. T. Jr. 1997. Personality trait structure as a human universal. *American Psychologist* 52: 509–516.
- Nesi, H. 1995. A modern bestiary. *English Language Teaching Journal* 49: 272–278.
- Olateju, A. 2005. The Yoruba animal metaphors: Analysis and interpretation. *Nordic Journal of African Studies* 14: 368–383.
- Ortony, A. 1993. *Metaphor and Thought*. Cambridge: Cambridge University Press.
- Shepard, P. 1978. *Thinking Animals*. New York: Viking.
- Shepard, P. 1996. *The Others: How Animals Made Us Human*. Washington, DC: Island Press.
- Sommer, R. 1988. The personality of vegetables. *Journal of Personality* 56: 667–683.
- Szasz, T. 1993. *A Lexicon of Lunacy*. New Brunswick, NJ: Transaction Publishers.
- Uher, J. 2008. Comparative personality research: Methodological approaches. *European Journal of Psychology* 22: 427–455.
- Ulrich, R. S. 1993. Biophilia, biophobia, and the natural landscape. In *The Biophilia Hypothesis*, 73–137, ed. S. Kellert and E. O. Wilson. Washington, DC: Island Press.
- Urton, G. 1985. *Animal Myths and Metaphors*. Salt Lake City, UT: University of Utah Press.