

The Meaning of Animals

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Abstract

This research examines the social construction of animals by a rural Allegheny culture using a linguistic approach based on estimating the set of attributes associated with the words used to describe animals. We asked 268 respondents to free-associate with the nouns chicken and deer when seen in a context of other words related to nature. Their responses were coded, and the frequencies of words and word groupings were tabulated for sub-samples of differing age, gender, and occupation. Response words were categorized into seven typologies including two affective types. The results indicate that except for possibly the very young, the social meaning of chicken and deer did not vary with gender, age or occupation. The respondents interpretation of a living chicken is indistinguishable from that of unprepared food. Their interpretation of deer is broader and primarily one of interaction with a lesser adversary.

Introduction

The oppression of animals is a current matter of concern to many in society. There are now many activist groups pleading the case of animal rights. However, if people are going to take social action against the oppression of animals, they must be able to conceptualize this oppression. It may be argued that oppression is built into our definitions of non-humans. When we perceive an animal, what registers with us is less the animal itself than a human-defined set of attributes. We can see these assumed attributes in action when an animal does not behave according to its construct. For example, members of the authors family living in a suburban neighborhood have a pet chicken that goes in and out their patio door along with their cats. This behavior is contrary to what humans expect from a chicken (Figure 1). The pet chicken shows emotion and intelligence when given the opportunity, so why should this behavior seem unusual?

Language and the Construction of Animals

Our words reflect our views of animals. But words alone do not convey meaning without knowing who said them and how those words came to be chosen. Structuralists believe language forms the preeminent theoretical and empirical model for studying culture (Hall 1980; Levi-Strauss; 1976). Ricoeur (1986) describes social science's principal attitude of analysis as conversational. This attitude underlies the method of using first-hand studies to elicit the meaning of social life from the standpoint of its participants (McCarthy 1996).

Nibert (2000) argues that language is yet another powerful force that both reflects and conditions human perceptions and attitudes toward devalued humans and other ani-

mals (p. 219). For example, one way in which humans anthropocentrically distance themselves from others is in the deanimalized description of our bodies and social activities. Humans have hair, others have fur. Humans have skin; others have hide. Humans have sex; animals mate, rut or reproduce. Humans are called dog, pig, cow, jackass, ape, turkey, with intent to insult and disgrace (p. 219). The practice of stalking and killing other animals is sanitized by referring to other sentient beings as game ; terms such as culling, harvesting, and taking are used instead of the words killing or murdering (Nibert 2000, p. 220).

The Social Construction of Animals

Studies of the social construction of animals through human narratives about them have contributed to understanding the relation between culture and language. Using a large table of British idioms called the British National Corpus, Stibbe (2003) examined the traditional folkloric (and affectively negative) construction of the pig as piggish. He then compared this with its new affectively neutral and de-animalized reconstruction as ambulatory pork in a narrative of the pork industry. This latter discourse reduces the pig from being negative but still an animal existing purely in terms of food value to humans. Language not only frames our view of animals, it delimits our total understanding of them (Fairclough, 1992).

From humans perspective, animals are social constructs (Arluke & Sanders, 1996). They appear to us through the aggregation of those attributes that we humans can agree are appropriate to them. Even if animals could speak to us rather than only listen (in the best of cases), we would still perceive them as constructs. We use language to accomplish this task of construction. Some structuralists believe that we can penetrate the veil of language to reach the underlying meaning (McCarthy, 1996). There may be no underlying meaning, however, other than restating the list of attributes using a symbol set which transcends the limitations of specific languages. In any case, meaning is a term for the listing of attributes using a (presumably) finite set of symbols. From this standpoint, then, we may discuss the meaning of animals defined through words. The meaning of animals seems to differ between persons raised in urban areas and those raised in rural areas. The first author was presented with extremely different ideas about the distinction between human and non-human animals by students born and raised in the rural area compared to students she had taught in Chicago. Urban populations have little direct contact with the processes that convert living animals into pieces of food. They are also more likely to have exposure to concepts such as vegetarianism and animal rights (Nibert, 2002).

Theory on the social construction of reality (McCarthy 1996; Denzin & Lincoln, 1998) and the importance of language in interpreting culture (Levi-Strauss, 1976) suggests that the meaning of animals to a social group might be characterized through its use of descriptive language. A simple beginning to characterizing the meaning of animals to that group would be to characterize the diction of the group when describing animals in a defined context. One way of accomplishing this would be through word associations.

The use of word free associations to study culture was pioneered largely through the work of Szalay and Deese (1978). Theirs is a semi-qualitative method not yet extensively used outside the field of social psychology. Their work focused on cross-linguistic studies

to compare cultural differences between groups in different countries affected by the confining constructs of their different languages. The use of word associations to explore how individuals organize their thinking has a long history. Galton (1880), Freud (1924), and Osgood (1952, 1964) pioneered its use in the psychometrics of individuals. Collective word associations form naming structures that are fundamental to human linguistics. They can even be exploited to map and thereby simplify the process of communication through computational methods such as case-based reasoning (Lamontagne, Langlais, & Lapalme, 2003).

In part because word associations are fundamental to communication, they are capable of embedding social constructions into the language itself. This process replicates itself whenever language is learned. For example, we can observe the process of learning connotations of airplane. The second author was riding on a small but regularly scheduled airplane in a storm with a group of passengers. A young girl seemed unable to decide whether she should be alarmed or entertained by the airplane's violent lurching. Her mother did not say they were in danger but used expressions describing their airplane flight associated with danger such as emergency and pilot can handle. The daughter accordingly adopted a negative affect appropriate to alarm. This now is a part of her experiencing an airplane. The word airplane has acquired additional meaning for her even though she may entirely forget her experience in the storm. It will now be associated with emergency. In the same way, learning language teaches (or programs) us about social rank of various animals.

The Present Research

The question of how people perceive animal characteristics and behavior became more important when the first author was teaching a newly developed course on environmental sociology that examined narratives conveying the natural connections between human and non-human animals. The university where the course was being taught is located in a rural area surrounded by the Allegheny National Forest. Here, hunting, farming, and logging are of economic importance. Local traditions regarding animals are different from those the authors experienced in their native northern suburbs of Chicago. Since narratives reflect culture, the goal of this research became to examine these indigenous values and beliefs regarding animals by examining the words used by this rural population to construct its narratives about animals.

In the present research we used an open-ended free-association method to recover the collective meaning of animals to a sample of Allegheny rural culture. By recovering associated words and phrases, we estimated the cultural mapping of two specific animals onto their attributes. Thus, the set of attributes of a chicken or chickens is identifiable with the social construction of a chicken to the extent that words represent the true attributes. Obviously sights, sounds, smells, and actions can also reside directly in memory non-verbally as attributes of some entity. They are part of one's personal construction of that entity, though in order to communicate these attributes to others, words are needed. Social constructions are thus made of words almost entirely. Collecting the set of attribute words, as we do here, reveals an estimate of what material a social construct is composed. It does not quantify the importance or role of the attributes.

The method of Szalay and Deese (1978) attempts to quantify something similar to importance, which they term salience, through the ordinal position of words in the response list as entered onto a printed questionnaire. We believe that this practice is potentially hazardous. Instead, we used oral interviews and encouraged respondents to comment on their associations. This commentary was coded and given the same weight as the word associations themselves. Thus, the importance of particular words and their referents emerges through repetition rather than through ordinal position.

Method

Development of materials

Animals (some) live in trees. One time the first author mentioned the word tree in class in the context of the university's felling of about twenty beautiful 80 year-old fir trees in front of the athletic center. These trees were part of the heritage of the campus, protested a political science professor through the campus e-mail. Pointing out the loss of habitat, the first author said, Cutting down those trees is murder. A student at the back of the class replied, You must be a tree hugger. The first author asked, What do you think of when you hear the word tree? He replied, tables, chairs, paper and money. I was a logger until I got arthritis in my wrists. Other students then volunteered their associations with the word tree.

The idea of studying people's word associations as a way of exploring their cultural beliefs about animals grew from this dialogue. The class formulated a survey to give orally to local residents using a table of questions asking the age, sex, place of birth, present address and occupation of respondents. The survey also contained the question Would you share with me the first thoughts that come to mind when you hear the word... followed by a word list including chicken as representative of a domestic animal and deer as representative of a wild animal.

Words have different associations in different contexts, which implies that the context of the test words needed to be provided as part of the questioning. The words chicken and deer were incorporated into a list of words relating to the outdoors and local nature in order to supply a context emphasizing an outdoor environment where animals themselves would live - as opposed to, for example, a restaurant. The words were in this order, and the entire list was presented at once: Chicken, Trees, Seneca Indian Reservation, Farm Animals, Deer, Kinzua Dam. Both the Seneca Indian Reservation and the Kinzua Dam are local features containing a large amount of publicly accessible woodland.

Participants

Two hundred sixty-eight (102 men and 166 women) participants were interviewed. The ages of interviewees ranged from five to 91 years old, Mdn = 33, M = 36.8. Their occupations were divided into groups having common occupational experiences (Table 1). The interviewees were selected by random encounter on the street and in stores and offices in the city of Bradford, PA, which has an estimated population of 10,000. Although the number of students (given as occupation) in Table 1 may seem over-representative for a non-college rural town, the student population is drawn almost entirely from the locale and is representative of it. Otherwise, the sample tallies with the known occupational proportions for able-bodied persons in the area. The presence of externally supported health care

and the emigration of graduated students account for the high proportion of health-care workers in the sample since these individuals tend to remain in Bradford.

The answers were collected in the form of single words or short phrases. In some cases of possible confusion, respondents were asked to explain their answers. We felt that this open-ended approach was better than either the fixed (one-word) response or the continuous response methods discussed by Szalay and Deese (1978), since the responses were both salient and well defined. We observed that the continuous response method, in which the respondent thinks of all the associated words he or she can in a fixed time, can lead to the inclusion of words having little relevance. Our method avoided this by being interactive. The interaction of the respondent with the interviewer kept the responses focused. For example, chain responses led to the inclusion of low-relevance words. Chain responses result from the tendency of the respondent (looking at what he or she has written) to merge his or her previous responses with the test word: e.g., knowledge goes in turn to book, printing, ink, blue, sky, and outer space. In the method of Szalay and Deese (1978), the inclusion of low-relevance words is commonly offset by a correction factor, which for words at the beginning of the response list is often an integer on the order of the length of the list. Because such a large multiplier is capable of effecting significant distortion, we used no multipliers.

We coded the whole text of the responses according to the 243 different words the respondents used to describe either chicken or deer apart from words such as and, the, common prepositions, etc., which were regarded as stop words and not coded. We termed the words used exclusive of stop words as keywords. We tabulated the frequencies of the keywords and keyword groups for each type of animal, age group, gender and occupation using a program called ANIMAL written and developed in C++ by the second author. The program was designed to take advantage of the fact that word triples may be regarded as two word pairs linked by a common word. We tabulated keyword frequencies and further examined the frequencies of word pairs, triples and quadruples.

Although having quantitative aspects, the method was essentially qualitative. Through examining the popular diction, we sought to reflect on the views, values, and culture of a sample of the rural population. We employed quantitative methods to guide our qualitative interpretation of the entire set of narratives through re-interviewing respondents in depth when needed. For example, one respondent used the word featherless. When asked what it meant to her, she said, I recently read about new experiments in genetic engineering to breed featherless chickens because they take up less space. I think this is a good idea.

Results

Entire Sample

Participants listed between 1-5 words associated with chicken ($n = 317$) and deer ($n = 358$). The most common responses for chicken were food ($n = 31$), eggs ($n = 24$), wings ($n = 21$), soup, ($n = 18$), and fried ($n = 14$). The most common responses for deer were hunting, ($n = 60$), buck ($n = 19$), venison ($n = 17$), Bambi ($n = 16$), and car ($n = 12$). See Table 1 for a list of all words that were listed more than once.

Categorization of Words. The word lists were examined for themes to allow for categorization. Most responses for chicken related to food and included words like eggs , wings , soup , and fried (n = 202). Words describing physical attributes of the animal or where it lives, but not exhibiting significant social relevance, comprised the second category and included words like farm, feathers , and coop (n = 71). Two additional categories describing affective attributes, positive (n =12) and negative (n = 14), were sufficient to allow all the words in responses to be categorized. Examples of affective attributes for chicken include loves and afraid . The remaining 20 words did not fit into any of the above categories, nor did they appear to relate to each other. No correlations emerged between categories, i.e., participants who listed a food related chicken word were no more likely to list a food related deer word than participants who listed non-food related words for chicken.

Most responses for deer were associated with hunting related activities like season and antlers (n = 99). The second category contained words describing physical attributes and characteristics like buck, whitetail, and woods (n = 91). Words like venison and meat were included in the food category (n = 40). The fourth category was comprised of words related to automobile/deer accidents like car, dangerous , and roadkill (n= 29). The positive category included good and pretty (n = 31), whereas the negative category included bad and stupid (n = 19). The human-like characteristics of deer were conveyed through the image of Bambi, the anthropomorphized children s story. Because Bambi was the only word that appeared to relate to the human qualities of deer, it was placed into a separate category (n = 16). The remaining 35 words did not fit into any of the previous categories.

Single Responses

One hundred twenty-seven women and 69 men gave a single response in association with chicken and one response for deer . Because the number of responses varied for the remaining 73 participants, the two groups were analyzed separately. The most common responses for chicken were food (n = 24), eggs (n = 19), soup (n = 14), wings (n = 8), and feathers (n = 9). The most common responses for deer were hunting , (n = 41), venison (n = 15), buck (n =13), Bambi (n = 11), and antlers (n = 10).

Categorization of Words. As with the entire sample, most single responses for chicken related to food (n = 132). The next most common type of response related to physical characteristics of the bird (n = 47), followed by negative (n = 8) and positive (n = 4) attributes. Five words did not fit into any of the above categories.

Also similar to the entire sample, most of the single responses for deer were associated with hunting related activities (n = 59). Physical characteristics comprised the second category (n = 59), followed by food (n = 29), positive attributes (n = 13), human qualities (n = 10), and negative attributes (n = 8). The remaining 6 words did not fit into any of the previous categories. No correlations emerged between categories, i.e., participants who listed a food related chicken word were no more likely to list a food related deer word than participants who listed non-food related words for chicken.

Sex, Age, and Occupational Differences. Food related words were most commonly listed by both sexes. Women most frequently named food (n = 19), eggs (n = 13) ,

soup (n = 10), wings, (n = 7), fried (n = 6), and farm (n = 6), and men listed eggs (n = 6), wings (n = 6), food (n = 5), KFC (n = 5), soup (n = 4), and feathers (n = 4).

For deer, women most frequently named hunting (n = 28), venison (n = 8) , Bambi (n = 7), antlers , (n = 6), and buck (n = 6), and men listed hunting (n = 13), venison (n = 7), buck (n = 7), antlers (n = 4), and Bambi (n = 4).

When asked, all but three of the 166 women said that they did not hunt, but they equated hunting with deer because their husbands, children, or other family members hunted deer. Furthermore, some said they did not process deer themselves and insisted that their husbands take the kill to deer processors.

The five most frequently listed words associated with chicken and deer were examined to determine nature of the relationships between word choice and sex, age, and occupation. No differences emerged (all Fs < 2.48, ns). See Table 2 for a list of occupations of the participants.

Word categories were also tested. No sex differences emerged for chicken (all Fs < 2.22). Women (M = .09) were more likely than men (M = .01) to use positive words to describe deer , F (1, 194) = 4.68, p < .03. No differences emerged for age and word categories (all Fs < 2.00, ns).

Multiple Responses

Because the number of responses varied among participants who listed more than one word (n = 73) in response to chicken or deer, a qualitative analysis was undertaken on the multiple-word responses. Research on priming (Mervis & Rosch, 1981) has found that the listing of one word should activate associated words in an individual's mental network. This suggests that the responses given by participants who listed more than one word may reveal how words associated with chicken and deer are organized in people's schemas.

Of these 73 respondents, only 17 gave multiple responses to both stimulus words. The following results are from respondents who gave multiple responses to either word, i.e., some respondents who gave multiple responses to chicken gave a single response to deer .

For chicken , 32 participants listed multiple words. The pairs Kentucky fried and farm animal appeared twice. Twelve word groups were food related, e.g., dumplings , food . Four word groups contained attributes and characteristics of chicken, e.g., waking up , morning . Four word groups contained attributes and food related words, e.g., barbecue , garden , fertilizer . The remaining 12 word groups contained combinations of food, attributes, positive terms, and negative terms, e.g., ugly looking thing tastes good (Table 3).

For deer , 56 participants listed multiple words. Hunting season (n = 8) and car wreck (n = 2) were the only multiply-occurring word pairs associated with deer. One word group was food-related (meat, table). Twelve word groups related to hunting, e.g., buck , season . Two word groups contained characteristics, e.g., apple, orchard . and eight groups related to car accidents, e.g. dangerous (to) cars . The remaining word groups contained combinations of food, attributes, hunting, positive terms, negative terms, car accidents, and human qualities, e.g., car, accident, sausage (Table 3).

Discussion

The present study examined the associative meaning of the two animal words, chicken and deer, in order to shed light onto the social meaning of their referents: a domestic and a wild animal respectively as well as indirectly on the meaning of other members of the domestic and wild classes. The words hunting and food and specific examples of food made up the top three responses for all. This is likely to be a result of the relative immobility and stationary qualities of the rural population sampled.

What do the words and phrases people associate with the word chicken tell us about the social construction of a chicken by the rural Allegheny community? The words food , eggs , wings , soup , and wings were the most common. Eggs, fried chicken, and chicken wings are dietary staples. Commercial brands of chicken products were mentioned, e.g., Kentucky Fried, Tyson, and Purdue. Farm animals appeared twice. Residents of this community come mostly from families who have lived in this rural area for a long time, and many of these families once operated farms. Some women reported gathering eggs and cooking chickens. The memory of farming is suggested through words like farm , coop , shit, smell , repulsive , feathers , rooster , and morning . Many respondents who used these and similar words said they had participated in farming. The response of two participants who grew up on farms reflected the view that the death of chickens is a part of everyday life. One respondent related the story of eating a pet chicken that had been cooked by her grandmother: I felt bad but not so bad; that's what chickens are for. Another respondent commented that I watched my father kill chickens. It's quick we have to eat.

Outside of being described as good to eat, no other positive attribute appears in any description associated with chicken . The negative affect words used are denigrating, for example, things, ugly, and skinny. Sickness and cowardliness are also associated with chickens through such words as sick, pox , cowardly , and fear. By word count, the overall affective response to chicken appeared to be neutral (Figure 2). Of the total number of categorized words associated with chicken, 67% are applicable only to non-humans. For the purpose of tabulation animal was included among these since that usage conforms to that of the group examined. Animals do not have souls insisted one respondent. Others expressed similar sentiments. No human-like or dangerous characteristics were applied to chicken.

The words used in conjunction with the word deer emphasize deer hunting as a source of recreation and food as indicated by the most popular word pair, hunting season. Parts of the deer's body were mentioned, especially antlers and trophy words such as eight-point. The words venison , sausage , and steak , appearing in that order, suggest the type of meal the respondents make from deer. Popular word pairs include buck season and doe day , suggesting widespread technical familiarity with hunting rules. During the hunting season, men carrying rifles are not uncommon sights on the streets of Bradford. Gifts of deer sausage are frequent, and numerous deer-processing facilities exist in the area.

Unlike tame chickens, wild deer have the power to harm humans, if only through fatal misadventure with automobiles. This sentiment was expressed in the phrases car accidents , car wreck , always (on the) road , dangerous to cars , and dangerous on

the road. Members of this community who commute long distances at night have been given humorous awards for the number of deer they have killed and injured along the way. The relative frequency of men's ($n = 3$) and women's ($n = 10$) accident-related words suggests that men were less concerned with car accidents than women. While both sexes were worried about what happens to the car in a collision with a deer, only women reported having any concern over the fate of the deer involved. On the subject of these animals, men and women appear to have equilibrated their opinions through generations of contact in this hunting and farming community.

Also unlike chickens, deer were evidently regarded as being capable of having some human qualities. References to Bambi were surprisingly commonplace and uniformly distributed among both genders and all age groups. The word seemed to be used differently by different people. We are not killing Bambi, said one hunter, whereas children identified Bambi with nature and the forest. Interestingly, some participants' responses contained conflicting perceptions of deer as targets for hunting and as sentient beings with human-like qualities. These views were reflected by one participant, who upon hearing of a program to sterilize does to reduce the deer population in Illinois, commented That's terrible! They would have to have surgery and that would really hurt the deer. They would be so afraid.

Deer were perceived as having many positive attributes besides tasting good when cooked. These were expressed through words of admiration, nature words, and words of empathy. Deer were graceful, beautiful, peaceful, good, cute, and pretty. They were viewed as a part of nature as expressed through words like wildlife, woods, snow, winter, and twilight. Deer are most often seen in the early evening and are especially visible against the snow-covered forestland. Participants appeared to have empathy for deer that they did not have for farm animals, possibly because they envy deer's freedom; they are wild. One respondent mentioned feeder because they maintained a deer feeder in their backyard.

The words of empathy included sad, frail, poor, helpless, and little. While discussing the differences between deer and elk, one participant who photographs elk as a hobby, observed that Deer are skittish. Elk will come right up to you. You can shoot great pictures of them. I take schoolchildren to see them. This woman's husband is an avid hunter.

In spite of their good qualities, deer were also seen as a nuisance beyond just being a hazard to motorists. They eat the ornamental shrubs around people's houses: damn, stupid, creature, and [in my] garden were mentioned by several participants. The overall affective response to deer was positive as indicated in Figure 2.

Of the words listed in Table 1 as characteristics associated with deer, 63% are words applicable only to non-humans. This is not much different from the 67% in the case of chicken, and may reflect the general division between human and animal words. The partitioning of words comprises part of the partition humans erect against their association with other animals generally.

The choice of occupation is not an indicator of belonging to a separated culture. From professionals to laborers, there are few differences in diction on the subjects of chicken and deer.

Conclusion

We have applied a linguistic technique borrowed from psychology to explore the social construction of two animals. We have seen that the respondents language keeps the animals in their place and that their beliefs in the inferiority of animals are embedded in their diction. Had the test word been chickens rather than chicken , there may have been fewer food-oriented responses because chicken as a food has for many entirely displaced its meaning as a bird. This, however, is the point: Our language has largely erased the meaning chicken as a live creature. It appears that animals are capable of being oppressed, but fried morsels are definitely not. The animal activist must contend with the impression of a chicken that may be only 25% bird-related, the balance being nugget.

The social meaning of a chicken cannot be other than the totality of the characteristics the members of society associate with the word chicken. Thus, a living chicken , seen through the tabulation of ideas associated with the word chicken, is clearly constructed as food among the sample group in the rural Alleghenies. Even the animal properties of chicken , enumerated as characteristics in Figure 2 and listed in Table 1, are only those associated with raising them as a food source.

The corresponding social construction of a living deer is seen here as more complex than that of a chicken, but the deer is no less objectified in terms of its utility to humans or counter-utility to motorists as the case may be. The connection between the psyches of humans and non-human animals is tenuous (Irvine, 2004). Ignoring the possibility of such a connection is functional for society. It sanitizes our food and sport from the taint of killing a sentient being. Deer are defined as existing to provide bloodsport (Lawson, 2003).

One may step on a hill of ants and feel no guilt not because ants are not sentient but because ants are insignificant relative to the affairs of human beings. The relative insignificance of animal lives in the Allegheny rural culture is revealed by the comments. The views of this culture are held uniformly regardless of age, sex or occupation. The wild deer are held in high status, but they are still no more important than pieces of food. The chicken is held in low status and thought of as smelly, but mostly as eggs, wings, and Kentucky Fried. This is a culture in which people have for a long time actively hunted deer and raised chickens. The respondents came from families that have lived in the same locale for generations. They inherited a tradition of self-sufficiency based on land and forest resources. We are thus reminded that in this culture it has been vital to objectify utilitarian animals as food in order to construct the emotional distance needed to slaughter them. This can be extended even to Bambi. The myth of Bambi is patently unreal. There never was or could be a real deer that was Bambi having precisely human attributes. That Bambi is myth argues for the hunter in favor of the emotional distance humans have established. It is what excuses the hunter who said, We are not killing Bambi. Significant in the responses of the respondents is as much what was not said as what was said. In this survey there was no mention of anything like animal rights.

When the first author showed students films of factory fanning, they were shocked. For them killing a deer or two is OK. Slaughtering a couple of chickens that have led a free-range life is reasonable. Factory farming, while not unknown to them, is not a part of their tradition. Still, it is a subsistence tradition in which food for the table is primary and

whatever it takes is the appropriate way of obtaining it. The act of killing is what makes a person capable of independent survival. One student said, My father says hunting makes you a man. Does it? My father says that hunting is more important for children than for adults. This is the view held by many of the residents of this community (Lawson, 2003).

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The Meaning of Animals

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Note

Words or word groups that appear as variables in the analysis are enclosed in double quotation marks, but not all text in double-quotation marks constitutes variables. The double-quotation marks enclose the exact arrangement of letters constituting the variable except for parentheses. Parentheses enclose stop words omitted from the variable in the analysis but added back to form the original phrase.

Table 1.

Words Commonly Used by Respondents in Association with Chicken and Deer

Chicken	<i>N</i>	Deer	<i>N</i>
food	31	hunting	60
egg(s)	24	buck	19
wings	21	venison	17
soup	18	Bambi	16
fried	14	car	12
farm	11	season	11
feathers	11	antlers	10
dinner	10	meat	10
breast	7	white tail	8
barbeque	6	hunt	7
eat	6	accident	5
KFC	6	animal(s)	5
nuggets	6	beautiful	5
bird	5	cute	5
cluck	5	doe	5
good	5	forest	5
coop	4	roadkill	5
shit	4	woods	5
delicious	3	brown	4
little	3	dangerous	4

The Meaning of Animals

meat	3	dead	4
rooster	3	food	4
salad	3	good	4
afraid	2	kill	4
animal(s)	2	pretty	4
baked	2	road	4
butt	2	backyard	3
cooked	2	bad	3
feet	2	eat	3
fingers	2	sad	3
Kentucky	2	wildlife	3
love(s)	2	always	2
sandwich	2	apple(s)	2
sick	2	damn	2
supper	2	day	2
yum(my)	2	fast	2
		fun	2
		garden	2
		graceful	2
		guns	2
		horns	2
		Mom(my)	2
		nature	2
		peaceful	2
		sausage	2
		snow	2
		stupid	2
		wild	2
		wreck	2

Table 2.

Occupations of Participants

Occupation	<i>n</i>
Retired	20
Working student	5
Student	66
Outdoor: construction, laborer, pipeline worker, electrician, installer	20
Outdoor: landscaper	1
Manufacturing: technician, machinist, QC inspector, factory worker	4
Housewife, homemaker	6
Medical care worker: RN, med. tech., CNA, phlebotomist	49
Store & office: clerk, salesman, secretary, adjuster, office manager	29
Building maintenance: janitor, superintendent	2
Forestry: logger, logging truck and equipment operator	3
Court functionaries & law enforcement personnel	6
Transportation: truck and bus driver, courier	6
Unemployed	9
Education: teacher, aide, professor	9
Social service: social worker and legal advocate	14
Office-based management: business executive	5
Food service: food service worker, bartender, cook, waitpersonnel	5
Office-based computer and engineering personnel	4
Physician, dentist, chiropractor	1
Librarian	1
Professional sports and entertainment	

Table 3.

Multiple Word Responses to Chicken and Deer

Chicken	Deer
ugly looking thing tastes good	hunting doe day 8 point dear mom
good food cooked home	beautiful wild creature fun hunt
daughter loves (to) eat a lot	nobody killed mom live backyard
terrorist tactics frog leg mind	Bambi damn Disney co-opting everything
cacciatore feathers eggs	season kill hunting fun snow
bawk good eat	beautiful animal hunt watch
heads cut off	always road dead alive
cooking dinner tonight	first day buck season
wings delicious bird	sad bad hunting experience
little delicious bird	pretty dangerous car trees
barbecue garden fertilizer	huge ass forest rats
barbecue omelets	overpopulation run car
Kentucky fried ($n = 2$)	neat see backyard
scared person	car accident sausage
fried crispy	day buck hunt
waking up morning	venison hunting winter
cooked dinner	drive carefully twilight
good (for) you	kill buck tomorrow
good (to) eat	buck season
farm animal ($M = 2$)	poor Bambi
love (to) eat	apple orchard
Buffalo wings	good meat
fried wings	good hunting
produce farm	husband hunts
feet wings	hunting season ($n = 8$)
food eat	cute animal
noodle soup	meat table

The Meaning of Animals

cross street	car wreck ($n = 2$)
bird food	car accident
combine processing	kill devour
	good (to) eat
	Michigan white tail
	dew water
	little animal
	fast white tail
	hunting food
	dangerous car
	frail helpless
	front car
	hunting murder
	bad garden
	road dangerous
	car wreck
	love hunting
	nice animal
	dangerous road
	always (on the) road
	eat garden

Figure 1.

Seeking food and attention, a chicken and a housecat beg entry to a suburban kitchen.

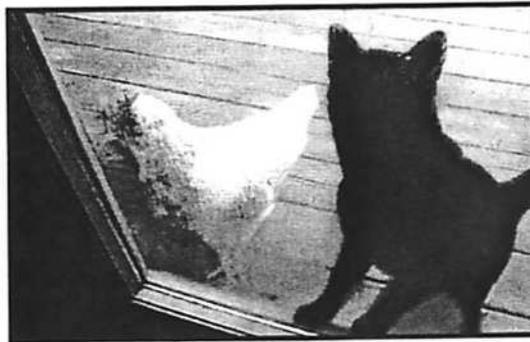


Figure 2.

Display by category of the number of times individual words appeared in responses to the test words, chicken or deer.

