Naming on the Bright Side of Life

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I examine the prevalence of positive and negative words like "happy" and "sad" in American place names. Four principal findings emerge. First, positive words appear in place names much more often than negative words. This emphasis on the positive is similar to that found in written English prose, but significantly greater in magnitude. Second, rates of positive naming are higher in artificial geographic sites such as towns, schools, and bridges than in natural sites such as lakes and mountains. Third, individual features vary systematically in their tendency to receive commendatory names; negative words are virtually absent in names for churches, cemeteries, hospitals, and schools. Finally, place names in western states are more likely to contain negative words than those in northern and southern states. These results are discussed in terms of the anthropological concepts of contagion and nominal realism as well as historical and cultural patterns within the United States.

Introduction

To everything there is a season, and a
time to every purpose under heaven:
A time to be born, and a time to die;
a time to plant, and a time to pluck up
that which is planted;
A time to kill, and a time to heal;
a time to break down, and a time to build up;
A time to weep, and a time to laugh;
a time to mourn, and a time to dance.
(Ecclesiastes 3:1-4)

In these famous verses from *Ecclesiastes*, life doles out rhythmic measures of sorrow and joy. Tragedies break over us as inevitably as eclipses of the sun and moon, and every ounce of gold is offset by an

equal measure of lead. Such frank fatalism may indeed portray our experiences accurately. *Ecclesiastes* is, after all, one of the Bible's wisdom books. Yet you would hardly infer this philosophy from most of human speech. If you look at how words are structured and put to use in languages around the world, you might conclude that people live somewhere close to Eden.

Consider how often we mention positive words like "good" and "happy" compared with negative words like "bad" and "sad." Word counts of connected text find repeatedly that positive words are used far more often than negative words (Zajonc 1968; Boucher and Osgood 1969). For example, "happy" occurs almost three times more often than "sad" in American written texts. "Good" outnumbers "bad" by almost six to one, and "beautiful" more than "ugly" by the same margin. Even when people mention positive and negative words together, they give top billing to the brighter side of life. Thus, in phrases like "happy and sad," "good and bad," "rich and poor," "life and death," and "sweet and sour," the positive word is generally placed before the negative word (Cooper and Ross 1975).

This optimistic view of life is not just a matter of how often we use different words and arrange them in phrases or sentences. It is actually built into the very structure of the vocabulary itself. For instance, consider antonyms that denote opposite poles on an evaluative dimension, such as "beautiful" and "ugly" for the beauty scale or "happy" and "sad" for the happiness scale.[1] The antonyms in these cases are simple words that are structurally unrelated. Other antonyms are related in that the two words are identical except that one contains an extra morpheme to express explicitly the opposite meaning of its mate. In English, these morphemes include prefixes like "un" and "im" which are used to mark the antonym pairs "happy-unhappy" and "moral-immoral." Note, though, the bias in how such prefixes work. The positive side of a scale is treated as the default or unmarked form, and is denoted by a simple word. The label for the negative side receives the prefix. Hence we can convey sadness with the adjective "unhappy," but there's no "unsad" in English to convey happiness (Boucher and Osgood 1969).

Thus, on numerous measures, language stresses the positive. But why do we see this pattern? Is it, in particular, driven by human nature or by Mother Nature? Perhaps the view of life presented in *Ecclesiastes*

is excessively dismal. Although few of our days are brimming with joy, we still may spend most of our time cruising on the happy side of neutral. Hence we say "beautiful" more than "ugly" because beauty is, happily, more common.

There are problems with this rosy picture, however. First, optimistic speech appears in languages around the world despite wide variation in the bounties of life. Thus, positive words are used more frequently than negative words in languages and cultures as diverse as Chinese, Finnish, and Turkish. There is some variation in the strength of the effect, but it cannot be predicted by measures of material wealth. The United States, for instance, is the richest nation in the history of humankind, but the American tendency to use positive words more than negative words is not correspondingly great. Indeed, the positive bias in English is relatively small compared with other languages, including those whose speakers have been historically impoverished (Boucher and Osgood 1969).

Second, certain types of positive and negative events are balanced. All life is inevitably followed by death. Every year contains both a summer and a winter. If the Yankees are better than the Red Sox, then necessarily the Red Sox are worse than the Yankees. But Red Sox fans know from experience that life can get even gloomier. Every winner has at least one corresponding loser, but often many more. Yet in all these cases, our words emphasize the positive. "Life," "summer," "better," and "winner" are uttered far more frequently than their negative counterparts, which suggests an optimistic psychology that goes beyond what nature warrants.

Finally, at the level of language processing itself, positive words show psychological advantages over negative words. For instance, when studying a foreign language, we have to learn the meanings of many new words. As in English, some of these words are associated with positive and negative concepts, such as *khubsurat* and *basdurat,* which mean 'beautiful' and 'ugly', respectively, in Hindi. Memory researchers have found that novel words are learned more quickly when they have positive rather than negative meanings (Yavuz 1963; Anisfeld and Lambert 1966). This finding is not due to the possibility that the structures of positive words are easier to learn (though this might be true, too). When researchers invented novel words, such as *bax,* and gave them positive meanings on some occasions (*bax* 'faith') and

negative meanings on others (*bax* 'devil'), the word was learned more easily when it had a positive meaning.

Prior research on optimism in language has focused on the common word vocabulary. However, proper names can also highlight the good or the bad, as in Happy Lake, MI; Success Estates, UT; Poor Mans Valley, CA; and Ugly Mountain, WV. By examining optimistic language in such names, we may be able to probe some aspects of the phenomenon and the psychology of naming more generally. Here, I will examine the prevalence of positive naming in American place names using anthropological and cultural concepts to derive hypotheses and to analyze the data.

The two concepts from anthropology which I will draw upon are contagion and nominal realism. Contagion refers to the belief that essential qualities of an entity can be transferred to the self through some type of contact. Contagion ideas are best illustrated in the domain of food where the philosophy "you are what you eat" gets played out in cultures around the world. This philosophy holds that living things possess certain traits that define their type, such as courage in the lion or cowardice in the hare. These traits permeate the object, and are not destroyed through death or other transformations, including cooking. Indeed, they are contagious and can be assimilated into the self through ingestion, thus altering one's personal character, whether in physique or personality (Frazer 1937; Rozin and Nemeroff 1990; Simoons 1994).

Examples of food contagion pervade the anthropological literature. In cultures around the world, carnivores have been seen as strong and courageous and to acquire these desirable traits, warriors have consumed such animals in pre-battle rituals. Native Australians have eaten kangaroo and emu to inherit their jump and speed. Where we use caffeine to fight drowsiness, ancient Greeks popped tidbits of nightingale (Frazer 1951; Simoons 1994). Other animals have, or are perceived to have, repulsive traits, and so they are banned from the palate. Some peoples refuse to eat tortoise lest they become infected with its supposed stupidity or lethargy.

Such contagion beliefs may seem primitive, but the "rational" western mind has hardly escaped them. Even Thomas Jefferson, the consummate sage of enlightenment, was susceptible to such effects. Consider, for instance, Jefferson's vision of the English personality, as derived by rummaging through John Bull's stomach: "I fancy it must be

the quantity of animal food eaten by the English which renders their character insusceptible of civilization. I suspect it is in their kitchens and not in their churches that their reformation must be worked" (from a letter to Abigail Adams, September 25, 1785).

Psychological experiments have been used to track similar beliefs about contagion in current American culture. For instance, according to our stereotypes, wild boars are excitable and irritable whereas turtles are calm and good-natured. Nemeroff and Rozin (1989) conducted an experiment to test whether educated Americans would implicitly transfer these behavioral traits to persons who habitually ate the different animals. College students read one of two anthropological summaries of a fictional culture. The two summaries were identical except for the culture's treatment of wild boars and marine turtles. In one story, the people hunted boar for food and turtles for their shells but in the other story, they hunted turtles for food and boar for their tusks. After reading the story, the students rated members of the culture on various personality scales which were constructed to reflect the contrasting impressions of boars and turtles. The students rated the cultures' members as similar in personality to that of the animals they ate.

A culture's views about contagion are expressed not only in the objects that its members physically contact or shun, but also in its language. In particular, contagion need not require physical contact. Symbolic contact may be just as effective if one believes that a symbol carries the essence of its referent, an essence which can be transferred to any other object so labeled. This belief is called "nominal realism," and has been historically ascribed to supposedly "primitive" minds. As James George Frazer put it in *The Golden Bough*:

> Unable to discriminate clearly between words and things, the savage commonly fancies that the link between a name and the person or thing denominated by it is not a mere arbitrary and ideal association, but a real and substantial bond which unites the two in such a way that magic may be wrought on a man just as easily through his name as through his hair, his nails, or any other material part of his person. In fact, primitive man regards his name as a vital portion of himself and takes care of it accordingly. (1951, 284)

The developmental psychologist Jean Piaget (1929) made similar claims about the minds of children. In contrast, many analyses of names

in the western philosophical literature have emphasized the essential arbitrariness of the link between name and referent. Unlike common words, the semantics of a name resides in its reference and not in its sense (Kripke 1972). To the extent that names have sense, as Strawson (1950) and Searle (1958) have argued, it is driven by the nature of the world rather than the name. Thus, the name "Aristotle" does connote certain ideas, such as "student of Plato" and "teacher of Alexander," but these senses were built up over the lifetime of a particular individual. The causal link between reference and the sense of a name runs from the former to the latter. The psychology of nominal realism, on the other hand, reverses the causal arrow by first ascribing sense to a name, which then transfers to the name's referent.

In serene moments of clarified cognition, we may reject nominal realism and relegate its magical power to simple and childish minds. However, some American naming patterns suggest that nominal realism holds sway over our own behavior. For instance, personal names in many cultures are based on totemic animals in the hope that some of the totem's traits will transfer to the human namesake (Levi-Strauss 1966). Some might cite this totemism as an example of primitive thought. However, is this phenomenon all that different from our tendency to name sports teams after predatory animals with stereotypically nasty dispositions, such as lions, tigers, and bears (Smith 1997)? One would rarely if ever find teams like the Detroit Dandelions, the Chicago Sheep, or the Green Bay Guinea Pigs. Nominal realism predicts that we take properties associated with the label and ascribe them to the labeled even though there is no intrinsic connection between the two.

As another example, consider the ease with which names alone can arouse our stereotypes (see Greenwald and Banaji 1995, for a detailed review). For instance, people who view a film of a baby named "Dana" tend to ascribe girlish stereotypes to "her." Others, however, give more boyish ratings when they see the same film but where the child is named "David" (Condry and Condry 1976). Names apparently evoke not only referential gender, but also various stereotypes associated with gender, which are then attributed to the referent with no supporting evidence beyond the name itself, demonstrating, as with the sports nicknames, the implicit effects of nominal realism on our social perceptions.

When applied to place names, the concepts of contagion and nominal realism lead to some predictions about the incidence of positive and negative words. In general, of course, we should find that positive words appear in place names more often than negative words. In the absence of contrary evidence, we should assume that usage patterns in proper names will be similar to those found among common words. However, if nominal realism also affects the construction of place names, then we would expect that the strength of the bias toward positive language would be larger here than in the vocabulary of common discourse. Bad things do happen, after all, and sometimes we just can't avoid talking about them. Naming, however, provides greater freedom to express our natural inclinations. If one of those inclinations is the belief that the essence of a name's meaning is absorbed by its referent, then people should be quite wary of using negative words in names. If so, then the ratio of positive word frequency to negative word frequency should be higher in place names than in the common word vocabulary. For example, "sweet" occurs six times more often than "sour" in ordinary prose, but it is fifteen times more frequent among American place names. I will test whether this pattern holds generally across a wide range of positive and negative words.

More specific predictions about the distributions of positive and negative words in place names can also be derived from contagion and nominal realism. In particular, if the danger of contagion is seen as increasing with proximity to an infected object, then places closely tied to human activities—towns, schools, churches, bridges, airports, and other artifacts—should be especially insulated from pessimistic language and any hexes that might adhere to a place so named. Such language should be relatively more common in names for natural features like lakes and mountains.

In addition to looking at implications of contagion and nominal realism for place naming, I will test whether the tendency to name on the bright side of life varies systematically across the United States. In particular, I will compare rates of positive naming in the North, South, and West. On many measures, these regions have had, and continue to have, different cultural values and identities (Fischer 1989). Furthermore, prior research has shown that these cultural differences consistently leave their imprints on the naming landscape. Consider three examples. First, regionalism has been historically stronger in the South

than in the North. This difference is reflected in business names, where terms evoking national allegiance such as "American" are relatively rare in southern business directories compared with northern directories. In contrast, words with regional associations like "Dixie" are more popular in the South (Zelinsky 1980). Second, southern and western states have a stronger association with violence than do northern states. Violent crimes like homicide and rape have been consistently higher in the South and West (Baron and Straus 1989; Nisbett and Cohen 1996). This greater exposure to violence has not diminished its attractiveness, however. In fact, many studies have found that southerners and westerners have more positive attitudes toward violence than northerners do (e.g., Cohen 1996). These cultural differences are correlated with certain naming patterns. Place names and business names containing violent words, such as Kill Dead Creek, AR and Shotgun BBQ, TX are more common in southern and western states than in northern states (Kelly 1999). Finally, despite their proclivity for violence, southerners and westerners are seen stereotypically as more friendly and more personable than stodgy northerners. These stereotypes are consistent with the tendency for politicians from the South and West to use informal names like "Woody" and "Billy" rather than full and formal given names like "William," which are more popular in the North (Callary 1997). Given the robustness of regional naming differences such as these, it could be productive and informative to consider region in the analyses here. Significant regional differences in the rate of positive naming could provide insights into corresponding differences regarding outlooks toward life and their historical antecedents.

Methodology

Place Name Source

The United States Geological Survey's database of American place names was the source of data considered in this study. This database, known as the Geographic Names Information System (GNIS; see Payne 1995 and McArthur 1995, for further information), is available online (Internet address: www-nmd.usgs.gov/www/gnis) and on compact disk. I used the compact disk version for this study. The search engine for the database returned all place names in its registry that contained the keywords described in the next section, along with the state in which each place was located and the type of feature so identified (lake,

summit, park, populated place, etc.). The state information was used to examine regional differences in the tendency to prefer positive words in place names. The feature information was used to examine variability in the types of places that evoke positive naming. The GNIS system uses 65 feature categories. These features were classified as natural or artificial based upon the descriptions provided by the USGS. For example, lakes ("a natural body of inland water") and basins ("natural depression or relatively low area enclosed by higher land") were classified as natural; reservoirs ("artificially impounded body of water") and locales ("place at which there is or was human activity; it does not include populated places, mines, and dams") were classified as artificial. The USGS did not define two of the 65 features that appeared in the database searches—military and post office—both of which I classified as artificial.

Positive and Negative Search Words

Search words used in the analysis consisted of 126 pairs of antonyms. Each pair contained one word with a positive connotation and one with a negative connotation; 115 of the pairs were drawn from Zajonc (1968), who asked 100 college undergraduates to choose the word in each of 154 antonym pairs that had the more favorable meaning. The raters agreed quite well for most of the pairs, but poorly for some others. For instance, all of the raters believed that "better" was more favorable than "worse." However, only 52% preferred "play" to "work," perhaps because of some post-party guilt. Since the analysis depended on using search words that have clear, generally accepted connotations, I chose only the antonym pairs that reached at least 90% agreement across the raters. These 115 cases were supplemented with 11 more, such as "happy-sad," that Zajonc's students did not rate, but which other research has shown to have strong and unambiguous evaluative connotations (Osgood, Suci, and Tannenbaum 1957).

Word frequency values for all of these words were provided by Zajonc (1968), who in turn drew them from Thorndike and Lorge (1944). In 114 of the 127 antonym pairs (90%), the positive word appeared more often than the negative word in the Thorndike-Lorge text counts. Overall, positive words occurred over two times more often than negative words. These values illustrate the strength of the positive language bias in written English.

The GNIS database was searched for all place names that contained each target word. Place names were included only if the search word appeared as a separate word rather than as part of a compound. Thus, *Sweetwater* and *Badlands* were excluded from the analysis, but *Sweet Apple Crossing* and *Bad Name Spring* were included.[2] This qualification permits a fairer comparison with the word frequency data presented in Zajonc, which also excluded compound words. No place names existed in the GNIS database for 36 of the antonym pairs, such as "polite-impolite" and "promote-demote." Hence, the analyses were based on data for 90 of the original 126 antonym pairs. These pairs are listed in the Appendix.

Results

The presentation of the results will be organized into three sections. In the first section, I will present general patterns in the place name data, such as the magnitude of the positive naming bias in place names and differences between artificial and natural geographic features in the strength of the bias. I will describe regional variation in these general patterns in the second section and feature variation in the third.

General Patterns in Positive Naming

Each place name returned in the GNIS search contained a positive word, a negative word, or, in a few cases, such as Up and Down Lake, FL, both. Place names in the latter category were counted in both the positive and negative tallies. Overall, 81% of the 31,656 place names in the sample contained a positive word, but only 19% contained a negative word. It seems that Americans have shown an overwhelming bias to select words with positive meanings for their place names. Indeed, this bias is stronger than that observed in ordinary written English. Whereas the positive words in the sample outnumbered their negative antonyms by 2.1 to 1 in the Thorndike-Lorge frequency counts, the bias rose to a significantly higher 4.4 to 1 among place names (chi-square(1) = 2563.24, $p < .0001$). This general pattern appeared consistently at the level of the individual antonyms. For 67 of the 90 antonym pairs, the positivity bias was stronger among place names than among the common words in the Thorndike-Lorge counts (chi-square(1) = 21.51, $p < .001$).

Thus, the first hypothesis is supported. Words with negative connotations are relatively rare in English prose, but they are especially avoided in place names. This general effect, however, depends strikingly on the nature of the site to be named. Whereas 91% of places built by human beings received positive rather than negative names, only 53% of natural places did so. This difference between the naming patterns for artificial and natural sites was highly significant (chi-square(1) = 5734.18, $p < .00001$). As nominal realism would predict, people are particularly averse to using negative words in names linked closely to their personal lives, such as towns, schools, churches, and parks. What is quite surprising, however, is the near absence of a positive naming bias for the geography of nature. Given the large sample size for this study, the slight 53% tip toward positive naming is statistically significant (chi-square(1) = 27.17, $p < .01$), but the magnitude of this effect is clearly quite small, especially when compared with the strength of the positivity bias seen in English and other languages more generally. Indeed, positive words appear more often in the ordinary text of the Thorndike-Lorge counts than in names for the American landscape (chi-square(1) = 724.29, $p < .0001$). I will examine this surprising finding further in a later section.

Regional Differences.

Ideally, one would like to analyze regional differences through a complete 50 X 65 matrix, formed from the 50 states and 65 features. In such an analysis, each state would receive 65 scores, corresponding to the percentage of place names for each feature that contained a positive word. However, this approach was impossible because of the large number of empty cells. For instance, eight states did not contain dams with any of the search words in their names. The search returned only 27 states that contained at least one bridge and not a single state with a glacier. Overall, 1888 of the 3250 cells in the matrix lacked entries.

Given these circumstances, I examined the data statistically in two ways. I first treated individual states as the units of analysis collapsing over features. I then treated features as the units of analysis collapsing over states. Each method was structured so that effects of the general variables of region (North, South, and West) and geographic feature (artificial or natural) could be identified. The two approaches complement each other in that the weaknesses of one are offset by the strengths of the other.

In the first analysis, each state received two scores, corresponding with the percentage of artificial and natural features that received positive names. Each state was also classified as southern, western, or northern based on census divisions. The sixteen southern states were Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia (Census Divisions 5, 6, and 7). The thirteen western states were Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming (Census Divisions 8 and 9). The remaining twenty-one states were considered northern. Other criteria, such as economic, historical, or sociological, could be used to create regions but the resulting categories would look very similar to those provided by the census. Furthermore, the census system has proven fruitful in prior work on cultural variation within the United States (e.g., Baron and Straus 1989; Nisbett and Cohen 1996), including name variation (Kelly 1999).

The data were submitted to a 2 X 3 Analysis of Variance, with the factors being feature type and region. Both factors and their interaction were significant. First, positive words appeared in names of artificial features more often than in names of natural features ($F(1, 47)$ = 265.49, $p < .0001$). Second, the bias toward positive naming varied systematically with region ($F(2, 47)$ = 11.306, $p < .0001$). Paired comparisons confirmed that northern and southern states had significantly higher rates of positive naming than western states (North vs. West: $t(16)$ = 3.26; South vs. West: $t(15)$ = 3.39; both $ps < .005$). Patterns for the North and South were not significantly different.

Table 1 lists each state's positive naming rate for natural and artificial features. The means for these two feature types are also provided, and the states are ranked according to these mean values. Only one western state appeared among the ten states with the highest rates of positive naming, and this was Hawaii, whose history is quite distinct from that of the other western states. Nine of the ten states with the lowest rates of positive naming were from the West. It is noteworthy that Alaska appears as an extreme version of other western states and Alaska is also the only state that showed more positive naming for natural than for artificial sites. Furthermore, it is the only state where negative names for artificial sites outnumbered positive names.

Table 1. States Ranked by Mean Percentage of Sites with Positive Names.

State	Region	Artificial	Natural	Mean
HI	West	100.0	100.0	100.0
RI	North	100.0	72.7	86.4
PA	North	94.1	74.0	84.1
CT	North	92.6	71.9	82.2
KY	South	92.4	71.5	81.9
VT	North	91.2	71.9	81.5
WV	South	89.5	73.0	81.3
OH	North	96.5	66.0	81.3
ND	North	95.3	66.7	81.0
FL	South	98.1	63.4	80.8
NC	South	94.0	64.7	79.3
GA	South	97.0	60.6	78.8
SC	South	95.5	59.0	77.3
TN	South	95.1	59.0	77.0
NY	North	91.7	61.0	76.4
TX	South	89.4	63.1	76.3
NJ	North	94.4	56.9	75.6
IN	North	93.5	55.8	74.6
ME	North	89.1	59.3	74.2
MA	North	90.3	55.4	72.8
AL	South	97.4	50.0	72.7
WI	North	91.6	52.6	72.1
MD	South	94.2	48.8	71.5
OK	South	96.9	46.0	71.5
MI	North	93.4	48.2	70.8
DE	South	98.2	42.9	70.5
UT	West	77.9	62.7	70.3
AR	South	95.1	45.2	70.2
VA	South	90.6	49.3	69.9
NE	North	96.4	41.9	69.2
MO	North	90.0	46.7	68.1
MN	North	91.3	43.8	67.6
CA	West	84.3	49.4	66.9
KS	North	98.7	34.5	66.6
IL	North	92.8	40.0	66.4
IA	North	93.2	37.5	65.4
NH	North	73.9	53.9	63.9
LA	South	95.0	32.0	63.5

NM	West	84.6	41.0	62.8
SD	North	88.9	34.4	61.6
MS	South	94.1	28.4	61.3
NV	West	64.8	53.5	59.2
WA	West	73.1	42.6	57.8
OR	West	66.1	47.9	57.0
MT	West	76.0	33.7	54.8
CO	West	60.2	48.2	54.2
ID	West	57.3	43.8	50.6
AZ	West	58.8	40.6	49.7
WY	West	55.4	32.8	44.1
AK	West	39.4	43.6	41.5

As noted above, the regional difference must be qualified because it interacts significantly with feature type ($F(2, 47) = 9.43, p < .0005$). Table 2 shows mean positive naming rates for each geographical region as a function of feature type.[3] For towns, cities, and other human artifacts, the North and South use positive names far more often than the West (North vs. West: $t(14) = 5.14$; South vs. West: $t(13) = 5.74$; both $ps < .0001$). However, these regional differences are sharply reduced and statistically insignificant among names for natural sites. Even for natural features, though, the West does continue to show the lowest levels of positive names. In fact, a large majority (10 of 13) of the western states preferred *negative* names for natural features, whereas the majority of southern and northern states (21 of 37) preferred positive names.

Table 2. Mean Percent Positive Naming Rates by Region and Feature Type.

Feature	North	South	West
Artificial	82	80	65
Natural	61	54	47

There are two important limitations to the state analysis. First, states were treated equally though they varied considerably in the number of places that contributed to their positive naming scores. For

instance, the search returned 1727 place names for Ohio, but only 19 for Rhode Island. Still, both states contributed exactly two data points in the ANOVA. Thus, as with the constitutional rules for allotting seats in the United States Senate, this scoring procedure gives disproportionate representation to small states. Second, states also vary greatly in their distributions of geographic features. This fact may create regional differences that are not due to culture but rather to the concepts that certain geographical features intrinsically evoke in the American mind, regardless of region. For example, despite the sadness associated with them, cemeteries are protected from contamination by negative words. Overall, 96% of the cemetery names in the sample emphasized the positive over the negative, as in Happy Cemetery, AR and Life Cemetery, KS. Furthermore, all three regions of the country showed this strong positive naming bias for cemeteries, as more than 90% of cemetery names in the North, the South, and the West were positive. However, whereas cemetery names contributed 12% and 8% of the overall data for the North and the South respectively, they made up only 2% of western names. Mines, on the other hand, received positive names only 59% of the time, and they were located overwhelmingly in the West. When not taken into account, such geographical patterns could create an erroneous impression that westerners are fundamentally less positive in their naming than other Americans.

The feature analysis addressed these problems. Each geographic feature was given three scores corresponding with the percentage of names in the North, South, and West that contained positive words. This is a House of Representatives scoring system in that the impact of each state on the results is proportional to the number of its place names contained in the data set. In addition, the analysis allows us to examine regional differences with feature type controlled. For instance, although all states overwhelmingly preferred positive names for cemeteries, the 92% positive naming rate in the West was lower than the 97% and 96% rates that were observed for the North and South, respectively.

Eighteen features did not appear in one or more of the regions, and so were excluded from the analysis. The consequences of eliminating these features are negligible as together they constituted less than 0.5% of the total number of place names. The remaining 47 features consisted of 21 artificial and 26 natural geographic sites, which are listed in table 3. Data for these features were analyzed in a 2 X 3 ANOVA, with the factors of feature type (artificial or natural) and region.

Table 3. Positive Place Names by Region and Feature Type (in %).

Feature	Type	North	South	West	Mean
church	A	98.4	99.1	99.4	99.0
cemetery	A	96.6	96.5	92.4	95.2
school	A	97.1	93.7	90.3	95.1
hospital	A	94.4	83.3	92.6	90.1
populated place	A	91.5	89.3	79.1	86.6
post office	A	84.6	86.3	82.4	84.4
range	N	100.0	100.0	50.0	83.3
civil	A	93.5	73.2	83.3	83.3
airport	A	81.4	82.0	73.8	79.0
park	A	88.9	72.4	73.6	78.3
oilfield	A	77.8	78.8	75.0	77.2
rapids	N	100.0	66.7	64.3	77.0
bridge	A	77.8	74.1	75.0	75.6
building	A	85.0	71.9	69.1	75.3
locale	A	83.1	74.1	64.1	73.8
trail	A	85.7	95.7	36.4	72.6
other	A	100.0	100.0	14.3	71.4
valley	N	79.6	67.6	62.4	69.9
cliff	N	77.8	81.5	50.0	69.8
pillar	N	60.0	80.0	68.8	69.6
summit	N	73.6	82.3	51.0	69.0
plain	N	100.0	66.7	40.0	68.9
falls	N	82.4	81.8	36.4	66.8
mine	A	64.3	69.2	58.5	64.0
island	N	66.2	63.6	61.0	63.6
canal	A	81.1	50.0	57.8	63.0
spring	N	64.3	68.3	48.1	60.2
area	N	85.7	42.9	50.0	59.5
reservoir	A	64.4	72.5	39.9	59.0
reserve	A	66.7	100.0	0.0	55.6
ridge	N	71.2	56.1	38.2	55.2
dam	A	46.0	64.7	53.2	54.6
cape	N	66.7	64.4	31.3	54.1
beach	N	60.0	0.0	100.0	53.3
tower	A	53.9	53.9	47.5	51.7
stream	N	45.3	59.9	45.5	50.2
bar	N	33.3	65.0	50.0	49.4
basin	N	71.4	30.8	41.9	48.0
gut	N	50.0	31.6	57.1	46.2
flat	N	40.0	57.1	32.1	43.1
bay	N	49.0	33.3	32.6	38.3
lake	N	45.6	45.0	24.1	38.2
swamp	N	38.1	50.0	25.0	37.7
channel	N	35.7	19.5	46.2	33.8
gap	N	20.0	24.1	28.4	24.2
bend	N	0.0	11.1	40.0	17.0

Both feature ($F(1, 88) = 22.54, p < .0001$) and region ($F(2, 88) = 9.14, p < .0002$) were significant in the ANOVA, but the interaction was not ($F(2, 88) = 0.52, p > .50$). As in the state analysis, artificial features were more likely to receive positive names than natural features. However, since the state analysis collapsed across features, it was possible that the effect there was due to only a few natural features with especially high rates of positive naming and/or a few artificial features with low rates of positive naming. The feature analysis shows that the difference between nature and artifact is more widespread. Indeed, 13 of the 15 features with the highest rates of positive naming were artificial. In contrast, 13 of the 15 features with the lowest rates were natural (table 3).

The significant effect of region was due to higher rates of positive naming in the North and South than in the West (North versus West: $t(45) = 4.20$; South versus West: $t(45) = 2.42$; $p < .02$ in each case). The North and South did not differ significantly ($t(45) = 1.56$, $p > .10$). The lack of an interaction between region and feature indicates that the regional difference appeared in both natural and artificial places. Nineteen of the 21 artificial features (91%) and 17 of the 25 natural features (81%) showed higher positive naming scores in the North than in the West. Similarly, 15 of 21 artificial features (71%) and 18 of 25 natural features (72%) showed higher positive naming scores in the South than in the West.

Differences among Geographic Features

For each feature, the percentages of northern, southern, and western place names that contained positive words are listed in table 3. Means for the three regions are also provided, and the features are ranked according to these mean values. The most striking pattern that appears in the table is, of course, the large difference between artificial and natural sites in their tendency to receive positive names. However, other interesting differences can also be gleaned from the table. I will describe two here and will interpret them below. First, within the domain of artificial sites, places associated with religion, children, and the boundary between life and death have the highest rates of positive naming. Indeed, negative words are almost completely absent from the names of churches, schools, cemeteries, and hospitals. Second, artificial

sites that are most removed from everyday human affairs, such as dams, towers, reservoirs, canals, and mines, have relatively low rates of positive naming.

Discussion

This investigation produced four principal findings. First, positive words are more common in American place names than one would expect from their general frequency in English. Second, positive naming is especially likely for sites that were constructed by human beings. In fact, names for natural geographic features show only a slight trend toward positive naming. Third, even controlling for the distinction between natural and artificial, geographic features show significant variation in their tendency to attract positive names. Fourth, western place names are much more likely to contain negative words like "bad" and "death" than northern and southern place names. I will discuss these findings in two sections, one focusing on featural variation and the other on regional variation in the preference for positive naming.

Nature Versus Culture

The distinction between natural and artificial geographic features had the largest effect on the naming data. Positive words were much more common in names for artificial sites like cities and schools than names for natural sites like streams and valleys. Despite regional differences in the overall popularity of positive names, North, South, and West agreed in their linguistic preference for art(ifice) over nature (table 1).

This pattern is consistent with a naming psychology influenced by nominal realism. Stronger naming taboos should appear for objects more closely linked to the self. It's one thing to name a distant summit "Ugly Mountain," but quite another to name one's hometown "Uglyville." The pall of nominal realism would hang more heavily upon the town because constant human contact with its streets and squares would increase the chances that the negative essence of the name would infect the town's residents. Hence, nominal realism coupled with beliefs about contagion would act to protect artificial more than natural sites from names with negative connotations. People may readily admit that such beliefs are "mere" superstitions. But such cognitive admissions often have a curious lack of effect on emotion, motivation, and behavior.

Several more specific differences among geographic features in their rates of positive naming are also consistent with nominal realism. First, God and family are often touted as sacred for Americans, and places associated with God and family, such as churches, cemeteries, hospitals, and schools have been especially insulated from any taint of negativity. This linguistic shield has added interest since many of these places are often the sites of intense grief. But American habits are not really unique here. Naming taboos involving deities and relatives are quite common in other cultures around the world, and they can be particularly powerful in the context of death (Frazer 1958; Levi-Strauss 1966).

Second, within the domain of artificial geography itself, places associated most strongly with people's day-to-day lives receive higher rates of positive naming than places that are more removed. Thus, populated places (i.e., cities and towns), civil sites (i.e., political divisions like boroughs, counties, and townships), and post offices have higher positive naming rates than dams, reservoirs, trails, and towers. Some of these latter artifacts are essentially isolated outposts of human control in the depths of nature.

A nominal realism account of the data draws on a putatively fundamental characteristic of naming psychology that operates in all human beings regardless of culture. One might also consider the data from the specific perspective of the American psyche. Americans like to see themselves as having a high regard for nature, one bordering on pantheism. One can point to supporting evidence for this view, such as the national park system, the long history of energetic conservation groups, and the devotion to landscape painting represented by artists like Thomas Cole and Frederick Church. Still, Americans have also treated nature as something of a nuisance that had to be force fit into whatever platonic form of efficiency the Yankee mind deemed necessary for local and national growth. Thus, streets in cities like Philadelphia and New York were laid out in grids as though they rested on a Euclidean plane. Planners recognized that geography often did not agree with this ideal geometry, but nature would nevertheless be pressed, hauled, and leveled into conformity. "Manhattan's ancient hills, dales, swamps, springs, streams, ponds, forests, and meadows—none would be permitted to interrupt [the grid's] fearful symmetry" (Burrows and Wallace 1999, 421). Similar geometric parceling of the American landscape occurred on a much larger scale when the continent was carved into real estate.

"This checkerboard pattern was imposed on nearly the whole nation outside the original colonies: rich valleys, subhumid prairies, barren deserts, rocky mountain slopes, all were sliced into squares and offered in packages of the same size" (Boorstin 1965, 246). These ambivalent attitudes toward nature—awe coupled with a desire for control—are reflected in American naming patterns, which classify nature as bad almost as often as good. Development and wealth, on the other hand, require human works—cities, schools, bridges, dams, airports—and our historically unabashed boosterism of such projects and almost unquestioned confidence in their intrinsic worth are branded all over the American namescape.

As one final example of these points, consider naming patterns for natural lakes and streams with their artificial counterparts, reservoirs and canals. In both cases, the natural body of water had significantly lower rates of positive naming than the artificial body (lakes vs. reservoirs: chi-square(1) = 36.05; streams vs. canals: chi-square(1) = 6.25; p < .01 in each case). These naming differences give further testimony to the implicit value that Americans have historically placed on artificial, utilitarian "nature." Raw nature may, on occasion, also be a good thing, but most often when manicured or at least enclosed in some type of reservation. Thus, notice that the positive naming rate for parks in table 3, which includes national and state parks, is higher than those for all but one form of unbridled nature.

The Western Pessimist?

Rates of positive place naming in the West are far lower than those in the North and South. Does this difference indicate that westerners have had a historically more pessimistic view of the world than other Americans? The West was certainly dangerous, and its history of exploration and settlement contains many tales of struggle, terror, and death, such as the infamous travails of the Donner Party in the Sierra Nevadas. George Stewart describes Vitus Bering's Alaska mission as one in which "The commander was continuously ill, and the voyagers suffered from . . . cold, dampness, nakedness, vermin, fright, and terror. These were not good conditions for the successful giving of names" (1958, 388). Or, one might add, for the giving of names that indicate success. But were such western hardships and tragedies any more common or severe than those in the early days of eastern

settlement? Colonial Virginia, for example, had oppressively high mortality rates and the dread of death hung heavily over Puritan Massachusetts as well (Fischer 1989).

Perhaps we should think of the difference between the North and South on the one hand and the West on the other as a contrast between idealists and realists rather than optimists and pessimists. The colonists who settled the Atlantic seaboard in the Seventeenth Century were inspired by strongly held ideals of religion and social order. The great western migrations, by contrast, were spurred by more materialistic objectives: gold, fur, cattle, land, and the wealth that they conferred. Such materialism might foster realism, which becomes expressed linguistically in patterns of place naming.

This conjecture could stimulate further predictions about American naming patterns. Consider, for example, the Mormon migration to Utah, which more closely resembles the Puritan voyages to Massachusetts than the forty-niner rush to California. Interestingly, table 1 shows that Utah leads the western states in levels of positive naming, leaving aside the atypical case of Hawaii. Utah stands out particularly in its positive view of the landscape. Its 63% positive naming rate for natural features far exceeds the rates found in other western states, and is consistent with the Mormons' belief that they had settled in a Promised Land.

In sum, like clothing, diet, and sports habits, names provide implicit signs of a culture's values. The magnitude of the regional naming patterns described here testifies to the cultural diversity that has characterized the United States. Further investigation of these patterns could contribute significantly to our understanding of the American mind and its variation across time and across cultural groups.

Notes

1. Notice that it seems more natural to call this the "happiness" scale rather than the "sadness" scale, which is further testimony to optimism in language. We prefer to measure our lives in terms of happiness rather than sadness.

2. The common phrase *high school* was also excluded from the analyses. It occurred more than 15,000 times in the GNIS database, and so, if included, would have had a large impact on the results, representing almost 30% of all the data. Its exclusion is conservative in that it reduces the frequency advantage for words with positive evaluations. Furthermore, its pronunciation is more typical of English compound words than phrases. In particular, its accent on *high* is similar to that on compound words like *blackbird* and *greenhouse* and differs from the pattern on the corresponding phrases *black bird* and *green house,* which have accent on the second syllable (Chomsky and Halle 1968).

3. The mean positive naming rate calculated from the six cells in table 2 is 65%, which is much lower than the 81% rate stated in the prior section. This difference reflects the fact that the three regions and two features in table 2 are treated equally in the mean calculation although different numbers of place names contributed to the individual cell values. In particular, place names from the West and natural features were much rarer than other types of place names. By weighing them equally with other cells, the positive naming rate is pulled down. If each place name is counted only once, however, and classified as positive or negative, an 81% positive naming rate is obtained.

References

Anisfeld, M. and W.E. Lambert. 1966. "When are Pleasant Words Learned Faster than Unpleasant Words?" *Journal of Verbal Learning and Verbal Behavior* 5:132-141.

Baron, L. and M.A. Straus. 1989. *Four Theories of Rape in American Society*. New Haven: Yale U P.

Boorstin, D.J. 1965. *The Americans: The National Experience*. New York: Random House.

Boucher, J. and C.E. Osgood. 1969. "The Pollyanna Hypothesis." *Journal of Verbal Learning and Verbal Behavior* 8:1-8.

Burrows, E.G. and M. Wallace. 1999. *Gotham: A History of New York City to 1898*. New York: Oxford U P.

Callary, E. 1997. "The Geography of Personal Name Forms." *Professional Geographer* 49:494-500.

Chomsky, N. and M. Halle. 1968. *The Sound Pattern of English*. New York: Harper and Row.

Cohen, D. 1996. "Law, Social Policy, and Violence: The Impact of Regional Cultures." *Journal of Personality and Social Psychology* 70:961-978.

Condry, J. and S. Condry. 1976. "Sex Differences: A Study in the Eye of the Beholder." *Child Development* 47:812-819.

Cooper, W.E., and J.R. Ross. 1975. "World Order." In L.J. San and T.J. Vance (Eds.), *Papers from the Parasession on Functionalism* (pp. 63-111). Chicago: Chicago Linguistic Society.

Fischer, D.H. 1989. *Albion's Seed*. New York: Oxford U P.

Frazer, J.G. 1951. *The Golden Bough: A Study in Magic and Religion*. New York: Macmillan.

Greenwald, A.G. and M.R. Banaji. 1995. "Implicit Social Cognition: Attitudes, Self-Esteem, and Stereotypes." *Psychological Review* 102:4-27.

Kelly, M.H. 1999. "Regional Naming Patterns and the Culture of Honor." *Names* 47:3-20.

Kripke, S.A. 1972. "Naming and Necessity." In D. Davidson and G. Harmon (Eds.), Semantics of Natural Language (pp. 253-355). Dordrecht: Reidel.

Levi-Strauss, C. 1966. *The Savage Mind*. Chicago: U of Chicago P.

McArthur, L.L. 1995. "The GNIS and the PC: Two Tools for Today's Toponymic Research." *Names* 43:245-254.

Nemeroff, C. and P. Rozin. 1989. "'You are what you Eat': Applying the Demand-Free 'Impressions' Technique to an Unacknowledged Belief." *Ethos* 17:50-69.

Nisbett, R.E. and D. Cohen. 1996. *The Culture of Honor*. Boulder: Westview P.

Osgood, C.E., G.J. Suci, and P.H. Tannenbaum. 1957. *The Measurement of Meaning*. Urbana: U of Illinois P.

Payne, R.L. 1995. "Development and Implementation of the National Geographic Names Database." *Names* 43:307-314.

Piaget, J. 1929. *The Child's Conception of the World*. London: Routledge and Kegan Paul.

Rozin, P. and C. Nemeroff. 1990. "The laws of sympathetic magic: A psychological analysis of similarity and contagion." In J.W. Stigler, R.A. Schewder, and G. Herdt (Eds.), *Cultural Psychology:Essays on Comparative Human Development* (pp. 205-232). Cambridge: Cambridge U P.

Searle, J.R. 1958. "Proper Names." *Mind* 67:166-173.

Simoons, F.J. 1994. *Eat Not This Flesh: Food Avoidances from Prehistory to the Present*. (2nd Ed) Madison: U of Wisconsin P.

Smith, G. 1997. "School Team Names in Washington State." *American Speech* 72:172-182.

Stewart, G.R. 1958. *Names on the Land*. Boston: Houghton-Mifflin.

Strawson, P.F. 1950. "On Referring." *Mind* 59:320-344.

Thorndike, E.L. and I. Lorge. 1944. *The Teacher's Wordbook of 30,000 Words*. New York: Teacher's College, Columbia U.

Yavuz, H.S. 1963. "The Retention of Incidentally Learned Connotative Responses." *Journal of Psychology* 55:409-418.

Zajonc, R.B. 1968. "Attitudinal Effects of Mere Exposure." *Journal of Personality and Social Psychology Monograph Supplement* 9:1-27.

Zelinsky, W. 1980. "North America's Vernacular Regions." *Annals of the Association of American Geographers* 70:1-16.

Appendix

Antonym Pairs From the GNIS Database

able-unable
above-below
active-passive
add-subtract
advance-retreat
advantage-disadvantage
agreeable-disagreeable
agreement-disagreement
always-never
beautiful-ugly
best-worst
better-worse
certain-uncertain
clean-dirty
direct-indirect
early-late
fair-unfair
familiar-unfamiliar
find-lose
first-last
forward-backward
found-lost
fragrant-foul
friend-enemy
friendly-unfriendly
front-back
full-empty
good-bad
happy-sad
harmonious-dissonant

high-low
honest-dishonest
honorable-dishonorable
important-unimportant
kind-cruel
leader-follower
legal-illegal
life-death
likely-unlikely
live-die
love-hate
major-minor
maximum-minimum
moral-immoral
more-less
most-least
necessary-unnecessary
nice-awful
normal-abnormal
now-then
on-off
optimism-pessimism
over-under
patience-impatience
patient-impatient
peace-war
pleasant-unpleasant
popular-unpopular
positive-negative
possible-impossible

practical-impractical
presence-absence
probable-improbable
pure-impure
regular-irregular
reliable-unreliable
remember-forget
reward-punishment
rich-poor
right-wrong
sacred-profane
smile-frown
strong-weak
succeed-fail
success-failure
superior-inferior
sweet-sour
timely-untimely
together-apart
true-false
up-down
upward-downward
victory-defeat
visible-invisible
wealth-poverty
whole-part
wide-narrow
wise-foolish
yes-no