Language as a Community of Interacting Belief Systems: A Case Study Involving Conduct Toward Self And Others

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Words such as "selfish" and "altruistic" that describe conduct toward self and others are notoriously ambiguous in everyday language. I argue that the ambiguity is caused, in part, by the coexistence of multiple belief systems that use the same words in different ways. Each belief system is a relatively coherent linguistic entity that provides a guide for human behavior. It is therefore a functional entity with design features that dictate specific word meaning. Since different belief systems guide human behavior in different directions, specific word meanings cannot be maintained across belief systems. Other sources of linguistic ambiguity include i) functional ambiguity that increases the effectiveness of a belief system, ii) ambiguity between belief systems that are functionally identical but historically distinct, and iii) active interference between belief systems. I illustrate these points with a natural history study of the word "selfish" and related words in everyday language. In general, language and the thought that it represents should be studied in the same way that ecologists study multi-species communities.

KEY WORDS: Altruism, belief systems, language, selfish, sociolinguistics, species of thought.

Language is usually most precise when it describes matters of importance to human affairs. Every part of a ship has a separate name and Eskimos have an elaborate vocabulary to describe the nuances of ice and snow. It is therefore surprising that ways of behaving toward self and others, manifestly important in human affairs, are surrounded not by a precise and clarifying vocabulary but by a dense fog of words that seem to defy common meaning. The word "selfish" provides one of many examples. It is based on a nebulous mix of short term and long term consequences, external action and internal motives. To some it is a pejorative and to others it is a principle to explain all rational behavior.

The ambiguity of words such as "selfish" is so familiar that it has not been seriously studied. One philosopher with whom I raised the subject merely shrugged his shoulders and replied that "people have agreed to disagree". But radical variation in the meaning of such important words requires an explanation. In this paper I offer a theory for explaining variation in word meaning that draws heavily from the biological fields of ecology and evolution.

Biology and Philosophy **10:** 77–97, 1995.

I argue that the problem of understanding the meaning of words such as "selfish" is similar to the problem faced by an ecologist studying a multi-species community. Each species is a coherent entity that behaves adaptively in its environment. If the species are not distinguished from each other, however, or if they are not recognized as functional entities, all hope of understanding either the species or the community is lost. It is absurd to think that an ecologist would fail to distinguish between wolves and deer but that is precisely what students of language do when they fail to identify heterogeneity and its functional basis in human thought.

WHY THE LINGUIST'S PROBLEM IS SIMILAR TO THE ECOLOGIST'S PROBLEM

My ecological/evolutionary view of language and the thought that it represents is elaborated elsewhere (Wilson 1990) and will be summarized here as a list of axioms.

1) Human behavior is functionally diverse: Ecologists take it for granted that natural environments afford many ways to survive and reproduce, which largely explains the multitude of biological species. Even single species are not uniform but themselves can consist of multiple types that pursue alternative strategies (e.g., Gross 1982; Robinson and Wilson 1994; Wilson 1994). Human phenotypic diversity can be interpreted in the same way. The first axiom asserts that human employ a multitude of strategies that are functionally designed to achieve proximate goals. The specific nature of the goals and the degree to which individuals are conscious of their strategies and goals are not important to my basic argument.[1] This axiom should be uncontroversial, but to my knowledge there is no tradition in the human sciences that studies human phenotypic diversity in the same way that ecologists study biological communities.

2) Human behavior is motivated by an underlying belief system. Functional phenotypic diversity in humans is produced by cognitive, developmental and genetic mechanisms that are poorly understood. The second axiom asserts that human behavior is partially motivated by an underlying belief system; an internal representation of the outer world complete with people, objects, events and the relationships between them. We do things because they seem reasonable against the background of our beliefs. Changes in belief cause changes in behavior.[2]

3) Many human belief systems are adaptive distortions of reality.[3] Numerous traditions in philosophy and the human sciences treat belief systems as mental representations of the world upon which vicarious experiments are performed (reviewed by Bradie 1986; Lakoff 1987). For the experiments to be predictive, the belief system must approximate the external world as closely as possible. If adaptive distortions of reality play a role at all, it is to accentuate the most

relevant factors at the expense of extraneous factors, much as mathematical models in science restrict themselves to a few critical parameters (Simon 1983). I have termed these factually based belief systems "Models of reality (MORs)" (Wilson 1990).

MORs can be contrasted with another kind of belief system in which distortions of reality play a more fundamental role. While MORs guide behavior by offering a model of the world upon which vicarious experiments can be performed, "Adaptive imaginary representations (AIRs)" offer a purely fictional world that is designed to unambiguously motivate a suite of behaviors. AIRs are less flexible than MORs but can be expected to thrive whenever the behaviors motivated by the fictional world are successful in the real world.[4] One advantage of AIRs over MORs is that they are easy to use. Intelligence goes into their construction but once they are built almost anyone can be guided by them. AIRs can also be more compelling than MORs. A soldier may fight harder if he perceives his enemy as a monster, for example, than as someone just like himself who is competing for the same square of ground.

4) A single belief system can motivate only a limited diversity of behavior: Although it is possible to imagine a single belief system that motivates the full range of human behavior, this "Olympian" view (Simon 1983) of human mentality is almost certainly false. To explain the full range of functional diversity at the behavioral level, we must therefore invoke diversity at the belief-system level.[5] In other words, we must envision human mentality as a community of interacting belief systems. Individuals that employ different belief systems interact with each other, but the belief systems themselves must also be isolated from each other to persist as separate entities that motivate different adaptive suites of behavior. This combination of interaction and isolation makes belief systems similar to biological species, which interact ecologically but are isolated genetically. To the degree that belief systems are expressed and transmitted through language, the coexistence of multiple belief systems in a human population that speaks the same language makes the linguist's problem similar to the ecologist's problem.

Although these axioms can be challenged in a variety of ways,they provide a good starting point from which two hypotheses can be derived:

Hypothesis 1: Since a belief system is a functional entity with the "purpose" of motivating an adaptive suite of behaviors, the language surrounding any single belief system should be clear and unambiguous. Linguistic ambiguity should not exist at the level of single belief systems.

Hypothesis 2: Since different belief systems are designed to motivate different suites of behaviors, consistency of meaning and other aspects of language will not be maintained across belief systems. Linguistic ambiguity appears when separate belief systems are not distinguished, as it would for an ecologist who failed to distinguish between wolves and deer.

A DIGRESSION: TWO EVOLUTIONARY PERSPECTIVES IN BIOLOGY

Before continuing, it is important to relate my approach to other evolutionary perspectives in biology and linguistics. Many biologists view species as historical entities and are interested primarily in tracing patterns of descent. This can be called the phylogenetic view. Other biologists view species as functional entities that are molded by natural selection to behave adaptively in their current environment. This can be called the adaptationist view. Since the phylogenetic view is always correct (all species are historically derived from other species) and the adaptationist view is often correct (many species are well-adapted to their current environment), these two evolutionary perspectives are conceptually fully compatible. Unfortunately, they conflict in a more practical sense. Establishing a phylogenetic relationship between two species involves finding traits that are shared by virtue of being present in a common ancestor. But species can also be similar, not because they are closely related phylogenetically but because they live in similar environments and independently evolved the same traits. Conversely, closely related species that occupy separate environments can lose the traits that they historically shared. Natural selection therefore erases the signs of history required for the phylogeneticist to operate.

Adaptationists are also hampered by phylogeny, which interferes with their ability to predict the properties of organisms purely as adaptation to the current environment. Some evolutionists are able to combine both perspectives but many others unfortunately gravitate toward one and merely pay lip-service to the other.

In linguistics, an analog to the phylogenetic view is represented in efforts to trace the historical relationships between languages (Cavalli-Sforza *et al.* 1988), the effects of geographical barriers on the formation of dialects (Hudson 1980), and so on. The analog to the adaptationist view, however, is almost entirely absent. This paper is an effort to apply the adaptationist view in biology to the study of language, although I also will be sensitive to historical relationships.

A NATURAL HISTORY STUDY OF COMMON LANGUAGE

To discover "species of thought" (my 1990 term for adaptive belief systems), I have searched for usages of words such as "selfish" and "altruistic" in a wide variety of texts. Continuing the analogy with biological species, I treat each word usage as a "specimen" that can be measured for a number of "characters". The characters are shown in table 1 and include all possible criteria for defining altruism/selfishness that I could think of. These include:

a) Effects on self and others. The concepts of altruism and selfishness are obviously founded on conduct toward self and others. As we shall see, however, variation can still be expected across belief systems.

b) Short-term vs. long-term effects. The immediate consequences of an action can be very different than the long-term consequences and belief systems might differ in the degree to which effects are integrated over time.

c) Material vs. psychological effects. Is a person who donates blood altruistic if his act of charity makes him feel good? Is Mother Theresa selfish if she thinks her life of self-sacrifice buys a ticket to heaven? These are some of the most venerable debating points in the academic literature on altruism and selfishness and we might also expect differences between belief systems in common language.

d) Types of psychological effects. A person might derive pleasure from behaving nicely towards others, he might avoid guilt imposed by a sense of duty, or perhaps he is motivated by religious incentives such as an afterlife.

For each word usage that I encountered in a text, I attempted to fill out the data sheet in table 1 as completely as possible. Some distinctions were difficult or impossible to make from the information provided by the text but this does not necessarily constitute a methodological failure. As we shall see, within a given belief system some distinctions are functionally irrelevant and should not be expected.

My choice of texts was eclectic. I avoided the academic literature, included word usages that I encountered during my normal reading and also made an effort to find texts in which the words "altruism" and "selfishness" figured prominently. A more systematic selection of texts will be highly desirable in the future. For the moment, however, it suffices to wander the unexplored terrain of common language in search of species of thought.

The first species: Benefitting self at the expense of others. Many usages of the word "selfish" conform to the surface definition of self-interested behavior without regard for others. For example, William James wrote in a letter to his mother, "When you speak of your own increased expenses, etc. I feel very guilty and selfish in entertaining any projects which look in the least like extravagance" (quoted in Feinstein 1984 p 195). These usages almost always concern material consequences of actions for self and others. They are usually made in passing and do not elaborate on short term vs. long term consequences, types of internal motivation or the other "characters" in Table 1.

A second species: Selfishness as self-destructive. A second common use of the word "selfish" is illustrated by a Reader's Digest article entitled "How Love Came Back", reproduced in its entirety in Table 2. The author admits to himself that he has been a selfish husband and vows to be loving to his wife and children during their vacation. His wife is so surprised by his kindness that she fears she must have a terminal disease, prompting the husband to reply "No, honey, you're not dying; I'm just starting to live!"

TABLE 1

Form for categorizing usages of words such as "selfish" that describe conduct toward self and others.

Reference:
Page:
Word:

1) Is there a distinction between long-term and short-term consequences of the action? If yes, then answer each of the section below separately. If no, then skip sections two and three. **yes** **no**

2) Short-term consequences	actor(s)	recipient(s)
Does the action have *material* short term consequences?	– – – 0 + ++ na	– – – 0 + ++ na
Does the action have give *pleasure* over the short term, regardless of the material consequences?	– – – 0 + ++ na	– – – 0 + ++ na
Does the action violate or affirm a sense of *duty*?	– – – 0 + ++ na	– – – 0 + ++ na
Does the action invoke any *religious* rewards/punishments?	– – – 0 + ++ na	– – – 0 + ++ na

COMMENTS:

3) Long-term consequences	actor(s)	recipient(s)
Does the action have *material* long term consequences?	– – – 0 + ++ na	– – – 0 + ++ na
Does the action have/give *pleasure* over the long term, regardless of the material consequences?	– – – 0 + ++ na	– – – 0 + ++ na
Does the action violate or affirm a sense of *duty*?	– – – 0 + ++ na	– – – 0 + ++ na
Does the action invoke any *religious* rewards/punishments?	– – – 0 + ++ na	– – – 0 + ++ na

COMMENTS:

4) Net effect	actor(s)	recipient(s)
Does the action have *material* overall consequences?	– – – 0 + ++ na	– – – 0 + ++ na
Does the action have/give *pleasure* overall, regardless of the material consequences?	– – – 0 + ++ na	– – – 0 + ++ na

TABLE 1 (continued)

Does the action violate or affirm a sense of *duty*?	– – – 0 + ++ na	– – – 0 + ++ na
Does the action invoke any *religious* rewards/punishments?	– – – 0 + ++ na	– – – 0 + ++ na

COMMENTS:

5) Are effects on self and others stated in a) *absolute* or in b) *relative* terms?

6) What pronouns are used to describe the situation?	actor(s)	recipient(s)
	I	I
	he	he
	she	she
	you	you
	we/us	we/us
	they	they
	society	society

7) Other/others treated as a) means to ends, b) ends in themselves, c)not applicable?

8) Is religion invoked in any way? a) yes b) no

8) Overall comments:

Despite its brevity and simplicity, this article contains a number of interesting features. First, there is a distinction between the short-term and long-term consequences of selfishness (the husband presumably gains an immediate gratification from his selfish acts). Second, the surface definition of benefitting self at the expense of others applies only to the short-term consequences. When all things are considered, the husband suffers from his own selfish behavior and vows to behave otherwise in the future. Third, it is difficult to distinguish among material consequences, pleasure, duty and religious rewards associated with the husband's newfound unselfish behavior.

Similar uses of the word selfish will be numbingly familiar to most readers. In Oscar Wilde's (1964) *The Selfish Giant*, a giant prevents children from playing in his courtyard, only to have winter descend permanently on his domain. An advertisement for the American Red Cross states "Do something for nothing. And you'll get everything." The word "selfish" and various synonyms are used 19 times in the first five chapters of the Alcoholic's Anonymous manual (1976) and in every case the long term consequences are portrayed as negative for the selfish person.

As might be expected, some of the most austere specimens of this species of thought can be found in the religious literature. My favorite example is a Hutterite document entitled "An epistle on brotherly community as the highest

TABLE 2

Full text of Sept. 1986 Reader's Digest article by T. Anderson entitled "How Love Came Back" The single use of the word "selfish" is shown in bold type.

I made a vow to myself on the drive down to the vacation beach cottage. For two weeks I would try to be a loving husband and father. Totally loving. No ifs ands or buts.

The idea had come to me as I listened to a commentator on my car's tape player. He was quoting a Biblical passage about husbands being thoughtful of their wives. Then he went on to say "Love is an act of will. A person can *choose* to love." To myself, I had to admit that I had been a **selfish** husband – that our love had been dulled by my insensitivity, in petty ways, really: chiding Evelyn for her tardiness: insisting on the TV channel I wanted to watch; throwing out day-old newspapers that I knew Evelyn still wanted to read. Well, for two weeks all that would change. And it did. Right from the moment I kissed Evelyn at the door and said, "That new yellow sweater looks great on you."

"Oh, Tom, you noticed," she said, surprised and pleased. Maybe a little perplexed. After the long drive, I wanted to sit and read. Evelyn suggested a walk on the beach. I started to refuse, but then I thought, *Evelyn's been alone here with the kids all week and now she wants to be alone with me*. We walked on the beach while the children flew their kites.

So it went. Two weeks of not calling the Wall Street investment firm where I am director; a visit to the shell museum, although I usually hate museums (and I enjoyed it); holding my tongue while Evelyn's getting ready made us late for a dinner date. Relaxed and happy, that's how the whole vacation passed. I made a new vow to keep on remembering to *choose* love.

There was one thing that went wrong with my experiment, however. Evelyn and I still laugh about it today. On the last night at our cottage, preparing for bed, Evelyn stared at me with the saddest expression.

"What's the matter?" I asked her.

"Tom," she said, in a voice filled with distress, "do you know something that I don't?"

"What do you mean?"

"Well ... that checkup I had several weeks ago ... our doctor ... did he tell you something about me? Tom, you've been so good to me ... am I dying?"

It took a moment for it all to sink in. Then I burst out laughing.

"No, honey, I said, wrapping her in my arms, "you're not dying; I'm just starting to live!"

command of love", written in 1650 by Andreas Ehrenpreis and translated for North American Hutterites in 1978. The Hutterites are the human equivalent of a bee colony, a metaphor that they themselves employ. All property is owned by the brotherhood and even a psychological sense of self is suppressed with metaphors that emphasize the worthlessness of the individual and the value of the brotherhood: "... Grapes have to be pressed for the wine. Every grape gives all its strength and all its juice into the one wine. In it no grape can stay as it is. This is the only way wine can be made. Grapes ... that remain whole are only fit for pigs or the manure heap (Ehrenpreis p. 23)."

Table 3 presents a list of words used by Ehrenpreis that could be categorized in terms of long term effects on self and others. The table is divided into quadrants representing the four possible combinations (++, +–, –+, – where the first and second symbol of each pair are effects on self and others, respectively). In principle, all four quadrants could be occupied. For example, it is perfectly possible that some human actions benefit the actor at the expense of others over

TABLE 3

Words used by Ehrenpreis (1650/1978) that could be categorized with respect to long-term effects on self and others. The word "Gelassenheit" has no English equivalent and means "The grateful acceptance of whatever God gives, even suffering and death, and forsaking of all self-will, all selfishness and all concern for private property (Ehrenpreis p18).

Effect on others	Effect on self: −	Effect on self: +
+		Brotherliness Community Discipline Faithfulness Gelassenheit Love Mutual help Obedience Order Sacrifice Surrender True equality
−	Arrogance Avarice Covetous desires Ego Greed Individuality Pride Selfishness Self-interest Self-seeking Self-will	

the long term, in which case words referring to these actions would occupy the lower right quadrant of Table 3. It turns out, however, that only two of the four quadrants are occupied. According to Ehrenpreis, all actions are unambiguously either good or bad for everyone involved.

As with the Reader's Digest article, Ehrenpreis is crystal-clear about the generic consequences of altruism and selfishness but remains vague about the specifics. Phrases such as "The most precious jewel", "The hidden treasure", "true life", "love", "enduring life and joy", "genuine happiness", "hundred-fold profit" and "power that gives strength to bear fruit" are difficult to classify into material, psychological and religious categories.

A third species: Selfishness as good for others. A third common use of the word selfish is illustrated by a book entitled *The art of selfishness* (Seabury 1937,

reprinted in 1964), which promises to "fill your life with confidence and success". The book is filled with anecdotes such as the following:

> Years ago, I decided to go abroad in preparation for my vocation. My mother was sixty-two. Eight of her friends wrote reminding me she was well along in years and pleading with me not to leave until she died. She passed away at the age of ninety-three. The writers of those letters condemned me as selfish because I left as I did. My mother suffered to have her wishes disregarded, but told me a few weeks before she died that one of the best things I had ever done for her was to leave her when and as I did. Had I not gone, it is obvious I would have begun by training in the fifties. I would have carried in my heart a grievance more hurtful to our relation than my absence. I could not have been the financial and spiritual support my profession made possible (Seabury 1964 p. 15–16).

This brief passage is similar to the Reader's Digest article in several respects. It makes a strong distinction between short- and long-term consequences of actions. It restricts the surface definition of selfishness to short-term consequences only. Material, psychological and religious factors all seem to act in the same direction and need not be clearly distinguished. Unlike the Reader's Digest article, however, it is selfishness that benefits both self and others over the long term.

Table 4 presents a list of words used in the first 50 pages of Seabury (1964) that could be categorized in terms of long-term effects on self and others. As with Ehrenpreis, two of the quadrants are empty, signifying that all actions are either good or bad for everyone involved. One needn't read between the lines to reach this conclusion because it is stated explicitly (p. viii): "Do this and you will discover, as I did, that what is good for you is invariably good for others."

The basic message of Seabury (1964) is that individuals must strive to develop their own potential and resist the constraints that others place upon them. The conventional virtues of duty and sacrifice to others should be avoided because even the recipients of your altruism will suffer over the long term by failing to develop their potential. If you support your unemployed brother, for example, he will become a helpless parasite rather than learning to stand on his own two feet. Thus, the conventional virtues that occupy the upper right quadrant (+,+) in table 3 are shifted to the lower left quadrant (–,–) in Table 4, often with the help of pejorative adjectives: "serfs of virtue", "sodden duty", "coercive goodness", "smirking self-sacrifice".

Seabury's use of the word selfish is complicated by an obvious question: What will prevent antisocial behaviors such as theft and murder if people freely follow their own interests? Seabury's answer is that such behaviors are stupid, not selfish, because their long-term effects are negative for the actor.

> But let us understand each other. This new liberty is not anarchy. There is no counseling of greed, of lust, of licentiousness in the attitudes of science. We are not justifying the frenzies of our age. Nor do we defend the barbaric ruthlessness so apparent in young people these days: that careless selfishness that tramples the flowers in your garden, runs your car into a ditch, mocks you for your sentiments and derides your faith in God. The rampant egotism of our day is not the product of a better ethic.

TABLE 4
Words used by Seabury (1964) that could be categorized with respect to long-term effects on self and others.

Effect on others	Effect on self: −	Effect on self: +
+		Cooperation Higher selfishness Integrity Knowledge Men of Science Mutual aid Natural decisions Selfishness True unselfishness
−	Apparant unselfishness Coercive goodness Cruel virtue Denial Duty Pseudomorality Pseudounselfishness Quasi-unselfishness Responsibility Sacrifice Self-denial Serfs of virtue Smirking self-sacrifice Tradition Unselfishness Virtuous conventionalists	Arrogance Avarice Blind rebels Careless selfishness Compromise Egotism Ego satisfactions Envy Falsely selfish Greed Lust Rampant egotism Ruthless egotists

It comes from the absence of any controls ... Riotous arrogance and rapacious rebellion are not constructive selfishness – they are insanity (p. 11–12).

Thus, Seabury's vocabulary must include two kinds of selfishness, the stupid selfishness that occupies the lower left quadrant and the true selfishness that occupies the upper right quadrant. According to Seabury, the two kinds of selfishness can be distinguished by applying the principles of science, that have performed such miracles in the material realm, to human conduct.

> There are, I suppose, four sorts of men on earth: ruthless egotists who take the way of greed; virtuous conventionalists, who follow the creeds; the blind rebels, who will not yield to any rules; and the men of science, who strive to obey natural law. There is no meeting point between the old and the new attitudes in the face of life's problems. We

> go two roads. Those who revere the "good old ways" follow the precepts and the conventions. Those who seek to obey nature, through the discoveries of science, follow another set of values (p. 27).

We must remember that Seabury was writing in 1937! With seemingly altruistic behavior that is really bad for everyone, selfish behavior that is good for everyone and therefore really unselfish, and apparently selfish behavior that is just stupid, the final result is the bizarre vocabulary shown in Table 4, in which "constructive selfishness" is the same as "true unselfishness" and "quasi-unselfishness" is classed with "falsely selfish". An additional peculiarity is that Seabury reserves the term "egotism" for the bad kind of selfishness (−−) and uses the word "selfish" with appropriate modifiers for both kinds of selfishness (++,−−).

A fourth species and an historical element: A more influential book with a similar title is Ayn Rand's *The Virtue of Selfishness* (1961), which expands upon the philosophical theme of her novels *The Fountainhead* and *Altas Shrugged.* Although framed in more intellectual terms, Rand's belief system is functionally identical to Seabury's. The goals of the individual are exalted as the highest good upon which others have no claim. The conventional virtues are blamed for man's ills. Two kinds of selfishness are distinguished, occupying the lower left and upper right quadrants of Table 5, which can be distinguished, according to Rand, by strictly adhering to objective, rational principles. The other two quadrants are left empty and, as with Seabury, Rand makes it unnecessary to read between the lines by explicitly stating that there are "no conflicts of interest among rational men (p. 50)".

Despite their functional similarities, the two authors do not acknowledge each other and it is unlikely that one belief system was historically derived from the other. Rand's individualism was firmly established in Russia before she immigrated to the United States and she did not achieve literary success until five years after the publication of Seabury's book. The belief systems themselves also provide a hint of historical independence. Although any belief system that exalts individualism must have two categories of selfishness, the actual words used to distinguish them are somewhat arbitrary. For example, Seabury could have reserved the term "egoism" for the good kind of selfishness as easily as the bad kind. If Rand's (1961) belief system was historically derived from Seabury, she would presumably have continued his arbitrary linguistic conventions but the opposite is true. "The virtue of selfishness" is subtitled "A new concept of egoism". Thus, species of thought can be functionally identical but historically separate, adding another layer of linguistic confusion.

DISCUSSION

I have only scratched the surface of functional and historical diversity of thought involving conduct toward self and others, but perhaps it is sufficient to evaluate our two hypotheses and the axioms from which they are derived.

TABLE 5

Words used by Rand (1961) that could be categorized with respect to long-term effects on self and others.

Effect on others	Effect on self: −	Effect on self: +
+		Cooperation Egoism Honesty Independence Integrity Logic Pride Productiveness Rational principles Rational self-interest Rational selfishness Reason Responsibility Self-esteem Selfishness Trade
−	Altruism Collective Faith Incomprehensible duty Moral cannibalism Mysticism Sacrifice Self-denial Self-immolation Self-sacrifice Selfish "shmoo" Unselfishness	Animal Blind desires Feeling Hedonism Irrational emotions Irrational values Irrationality Looter Mindless brute Moocher Nietzschean egoists Parasites Selfish brute Subhuman creature Urges Whims

MULTIPLE STRATEGIES AND THEIR COGNITIVE BASIS

Our first axiom was that humans, like biological communities, inhabit a multiple-niche environment that requires a diversity of strategies to achieve perceived goals. It is therefore useful to speculate that the self-oriented and other-oriented belief systems identified here constitute alternative strategies that occupy separate "niches" in human life, thriving in some situations and withering in others.

The self-oriented belief system is easiest to envision as a strategy because it directly encourages the pursuit of individual goals. What, then, are the costs of

this strategy and the benefits of the other-oriented strategy that allows it to persist in human thought? One possibility is that the other-oriented system actually exploits the believer to the advantage of others that perpetrate the system without following it themselves (e.g., MacDonald 1988; Dawkins 1982). In my opinion, this explanation is partial at best and fails to appreciate the advantages of cooperation that the other-oriented system promotes (Frank 1988; Wilson, Near and Miller 1994; Wilson and Sober 1994). Cooperation can be a very successful strategy, as long as the benefits are shared among the cooperators and non-cooperating "freeloaders" can be excluded.[6]

The interaction between cooperators and freeloaders is a central theme in economics, social psychology, and evolutionary game theory (reviewed by Wilson, Near and Miller 1994). All three disciplines conclude that the optimal degree of cooperation depends on the circumstances, such as the number of interactions among partners, ability to detect and retaliate against freeloaders and so on (e.g., Axelrod 1981). Even within a single set of circumstances, there may be no single optimal behavior but rather a stable mix of cooperators and defectors at equilibrium (e.g., Dugatkin and Wilson 1991). Thus, it is reasonable (and intuitively obvious) to expect adaptive human behavior to span the full range from extreme cooperation to extreme exploitation.

The next question is: What is the relationship between this behavioral continuum and the underlying belief system(s) that motivate the behaviors? Consider the following thought experiment, in which 2000 people are divided at random into two groups. One group is given a series of inspirational seminars on a self-oriented belief system and another group is given a series of inspirational seminars on an other-oriented belief system. Then each group is subdivided at random into subgroups of 100, which are placed in 10 different social situations that favor cooperation at the behavioral level to different degrees.[7] How easily could the two groups be distinguished on the basis of their behavior in each social situation? If they do not behave identically, if each belief system is more successful than the other in at least some contexts and if there is a selection process that causes successful belief systems to replace less successful belief systems, then we have reason to expect more than one belief system to be maintained in the population.

While it is not possible to actually perform this experiment, a variety of less well controlled natural experiments suggest that changing belief systems can have a dramatic effect on behavior. Consider, for example, the Alcoholics Anonymous manual (1976), whose readers are manifestly unable to survive on their own. The manual claims that selfishness is the root of the entire problem. Even the benign selfishness that seeks mutual aid won't do.

> The first requirement is that we be convinced that any life run on self-will can hardly be a success. On that basis we are almost always in collision with something or somebody, even though our motives are good. Most people try to live by self-propulsion. Each person is like an actor who wants to run the whole show; is forever trying to arrange the lights, the ballet, the scenery and the rest of the players his own way. If his arrangements would only stay put, if only people would do as he wished,

the show would be great. Everybody, including himself, would be pleased. Life would be wonderful. In trying to make these arrangements our actor may sometimes be quite virtuous ... What usually happens? The show doesn't come off very well, he begins to think life doesn't treat him right. He decides to exert himself more. He becomes, on the next occasion, still more demanding or gracious, as the case may be. Still the play does not suit him. Admitting he may be somewhat at fault, he is sure that other people are more to blame. He becomes angry, indignant, self-pitying. What is his basic trouble? Is he not really a self-seeker even when trying to be kind? Is he not a victim of the delusion that he can wrest satisfaction and happiness out of the world if he only manages well? Is it not evident to all the rest of the players that these are the things he wants? And do not his actions make each of them wish to retaliate, snatching all they can get out of the show? Is he not, even in his best moments, a producer of confusion rather than harmony? (p. 60–61).

> Selfishness – self-centeredness! That, we think, is the root of our troubles. Driven by a hundred forms of fear, self-delusion, self-seeking and self-pity, we step on the toes of our fellows and they retaliate. Sometimes they hurt us, seemingly without provocation, but we invariably find that at some time in the past we have made decisions based on self which later place us in a position to be hurt ... Above everything, we alcoholics must get rid of this selfishness. We must, or it kills us! (p. 62)

The emphasis on the value of others per se and the status of Alcoholics Anonymous as an effective treatment for alcoholism suggests that other-oriented belief systems can elicit behaviors that are difficult or impossible under the influence of self-oriented belief systems, even those that recognize cooperation as a form of enlightened self-interest.

On the other side, Branden (1989) offers a revealing account of how Rand's individualistic philosophy changed his life when he read *The Fountainhead* at the age of fourteen.

> There are extraordinary experiences in life that remain permanently engraved in memory; experiences that represent turning points; moments, hours, or days after which nothing is ever the same again ... The author's constructions, images, rhythms, all took hold of me in some profound way. The style reflected a manner of processing experience, a way of being conscious, which I had never encountered before and yet that seemed intimately familiar. Six years later, at one of my early meetings with Ayn, I told her, "My excitement wasn't just at the stylization of the writing – your particular way of seeing and re-creating reality, which runs through everything – it was like being in a stylized universe." She clapped her hands in appreciation of this image and later referred to it many times (p. 14).

Branden describes *The Fountainhead* as a "shield" and a "fortress" that protected him from a family and local culture that expected conformity and did not recognize his personal goals. Rand's books continue to sell many thousands of copies a year (Branden 1989) and are especially popular among adolescents, arguably the most individualistic stage of the life cycle. It is highly probable that her self-oriented belief system elicits a different suite of behaviors in the believer than the other-oriented system that it replaces.

To summarize, human behavioral diversity can be partially understood as a set of adaptive strategies that coexist in a multiple-niche environment. The

adaptive strategies are "coded" by an underlying set of belief systems; internal representations of people, objects and events that motivate the appropriate suite of behaviors. A belief system is more than just a way that behaviors are described; it is an important cognitive device that enables the production of behaviors. As with biological species, belief systems have a distribution and abundance; they are common in some areas of human life and rare in others, depending on the consequences of the behaviors that they promote.

THE FICTIONAL NATURE OF BELIEF SYSTEMS

The belief systems identified here clearly fall into the category of AIRs and Branden's term "stylized universe" is, in fact, a perfect description of an AIR. It is inconceivable that human conduct in the real world always results in long term effects that are either positive (++) or negative (−−) for everyone involved. The empty quadrants in tables 3–5 are therefore adaptive distortions of reality that remove the troublesome categories of mixed long-term effects (+−, −+), allowing the believer to proceed under the assumption that his behavior will produce a shower of benefits for everyone. It is also worth noting that the self-oriented belief systems are fundamentally religious in structure, despite their superficial emphasis on science and rationality. Rand was a proclaimed atheist but her faith in the goodness of rationality was unshakeable and the role of rationality in her system is identical to the role of God in Ehrenpreis' other-oriented system.

The following passages from Seabury (1964) illustrate another hallmark of an AIR:

> Should we not put obedience to cosmic law and bionomic principles (by which one means ways of life that are natural and discovered by scientific seeking) in place of the oblique prejudices that ruin our days? This decision each man must make for himself (p. 6).

> Shall we, in our personal lives, follow the old or the new ways? Shall we continue as slaves of decadent conventions, or take a place as self-respecting men upon the earth (p. 6)?

The pros and cons of these "alternatives" are so ridiculously lopsided that there is no decision to be made, but merely a road sign that instructs the believer to "turn here". Common language is awash with these kinds of statements, illustrating the pervasive role that AIRS play in every day life.

CLARITY OF LANGUAGE WITHIN SINGLE BELIEF SYSTEMS

Our first hypothesis, that single belief systems are surrounded by a precise and clarifying vocabulary, is supported by the data in some ways but not in others. Certainly there can be no doubt about the basic message of each belief system

and distinctions that are required to convey the message are crystal-clear (e.g., short-term vs. long-term effects). On the other hand, distinctions that are not central to the message are left vague and one even gets the impression that some of the ambiguity is purposeful, contributing to the adaptive design of the belief system. Thus, the first hypothesis, which assumed that clarity always contributes to functional design, was naive and should be revised as follows: *To successfully guide human behavior, single belief systems should clarify some distinctions, ignore others and obscure still others.*

Academicians often define altruism and selfishness on the basis of motivation (e.g., Batson 1991; Caporeal *et al.* 1989). Even if an individual benefits others at his own material expense, he may not be considered altruistic if he derives pleasure from his actions, or if failing to act would violate his sense of duty, or if he thinks that such actions are necessary for an pleasant afterlife. These distinctions are almost totally absent from the every-day belief systems that I have examined for reasons that are easy to understand from the functional standpoint.[8] To motivate the appropriate suite of behaviors as strongly as possible, the long term consequences of the behaviors are represented as a shower of benefits in which everything – material, psychic and religious rewards – is thrown into the bargain. Even Ehrenpreis (1650/1978) did not rely heavily on the afterlife but included healthy doses of psychic pleasures and material rewards, usually in the form of security from starvation rather than ostentatious wealth, although his metaphors make extensive use of the latter. There is no need to distinguish between varieties of reward in this context. The Red Cross slogan "Do something for nothing. And you'll get everything" is an elegant distillation of this functional ambiguity. It is also obvious that, within the other-oriented belief system, the "everything" that comes from helping others does not disqualify the actor as an altruist. That belief would be severely dysfunctional within the other-oriented system. If it exists in every day language it must be associated with another species of thought.

The smart and stupid forms of selfishness provide another source of ambiguity within the self-oriented belief systems. Despite the lofty appeals to rational thought and bionomic principles, the believer is provided with very few guidelines to tell one form from the other. I am tempted to speculate that this ambiguity is actually a design feature that allows the believer to pursue his perceived interests without feeling accountable for their actual effects on others. In addition, perceived interests that turn out to be bad for the believer can be attributed to a failure of judgement rather than a failure of the belief system, rendering the system unfalsifiable. Falsifiability is an asset for a MOR but a liability for an AIR.

LACK OF CONSISTENCY ACROSS BELIEF SYSTEMS

Our second hypothesis was that the semantic fog that hangs over words such as "altruistic" and "selfish" is due, in part, to coexisting belief systems that use the same words in very different ways. We have already seen that the fog is not

entirely dispelled even within single belief systems, but it becomes truly impenetrable when multiple belief systems are not distinguished from each other. Not only do functionally distinct species of thought use the same words in different ways, but so also do functionally identical species of thought that are historically distinct. In addition, coexisting belief systems contribute a third source of ambiguity that has not yet been discussed – active interference. As with biological species, species of thought do not exist in isolation but jostle each other for prominence. We might therefore expect the design features of adaptive belief systems to include defensive and offensive weaponry against other belief systems. Semantic confusion might therefore reflect not only historical independence and functional differences but the deliberate "jamming" of one belief system by another. Perhaps the belief that altruism is just another form of selfishness because it makes the so-called altruist feel good, provides one example of active interference that incapacitates the other-oriented belief system. I do not mean to pass judgement on the belief systems, however. Much good has been done in the name of enlightened self-interest and the other-oriented system has its dark side. My purpose is merely to apply the ecologist's paradigm to the realm of language and human thought.

ACKNOWLEDGEMENTS

I am grateful to the J. S. Guggenheim foundation for a 1986 fellowship that allowed me to initiate this train of thought. I also thank D. T. Campbell, A. B. Clark, L. A. Dugatkin, E. F. Keller, G. Pollock, and E. Sober for helpful discussion.

NOTES

[1] In its broadest sense, the first axiom merely invokes the concept of functionalism. It is also interesting to consider specific versions of functionalism, in which the nature of human goals and strategies are outlined in greater detail. In my opinion, the emerging field of evolutionary psychology offers the most promising specific version of functionalism. Relating the theme of this paper to evolutionary psychology is an ambitious project, however, so here I will confine myself to a single point: Some evolutionary psychologists think of the human mind as a collection of modules that are adapted to solve specific problems, such as social exchange (Cosmides and Tooby 1992), habitat selection (Orians and Heerwagen 1992; Kaplan 1992), and mate choice (Buss 1992; Ellis 1992), that were especially important for reproductive success in ancestral environments. The human mind is envisioned as a juke box, with many different records that have been precut by natural selection, one of which is selected by environment stimuli (Tooby and Cosmides 1992). Note that the environment is reduced to the role of a button-pusher in this metaphor and open-ended processes such as individual learning and cultural evolution do not play a large role. Although Tooby and Cosmides are partially playing the devil's advocate with their juke box metaphor, their modular view of the human mind has not yet been integrated with open-ended processes of learning and culture that create genuinely new adaptations. The belief systems that I attempt to study in this paper are definitely the product of such open-ended processes and therefore add a new dimension to the juke box metaphor in evolutionary psychology. However, this does not mean that belief systems are

uninfluenced by pre-evolved Darwinian algorithms. The psychological mechanisms that produce, retain, accept and transmit belief systems can themselves be regarded as Darwinian algorithms that maximize the probability that open-ended processes of learning and culture produce biologically adaptive outcomes.

[2] Evaluating this axiom is a complex matter with many conflicting trends in the psychological literature. At one extreme, people often seem to behave in ways that are counter to their beliefs and to be unaware of the factors that influence their behavior (Nisbett and Ross 1980). At the other extreme, Gilbert (1991, 1993) develops the provocative thesis that to comprehend an idea is to believe it, with automatic consequences for behavior. Obviously, I am only assuming that belief systems influence behavior and not that the second axiom is true in all cases.

[3] Throughout this paper I use the common language definition of "adaptive" as "contributing to functional design" and not the biological definition of "increasing reproductive success". To explore the biological adaptedness of belief systems, the theme of this paper must be related to evolutionary psychology, as outlined in note 1.

[4] When I say that a belief system "thrives" I am assuming that a selection process operates that causes some belief systems to spread at the expense of others, based on their design features. This selection process can be at the level of individual decision making (e.g., an individual "decides" that a belief system is not working and adopts another belief system) or at the level of cultural transmission (e.g., individuals do not evaluate or change their belief system but some belief systems are transmitted more effectively to other individuals). All forms of functionalism assume a selection process, and it is impossible to be more specific unless a specific version of functionalism is adopted.

[5] The partitioning of phenotypic diversity within and among belief systems is a complex issue that is beyond the scope of this paper. Any single belief system allows a limited diversity of behavior and it is presumably possible for people who share the same belief system to disagree with each other about how to behave. The point at which differences in behavior cannot be accommodated within a single belief system and are better motivated by separate belief systems is an empirical issue. In many ways the problem is similar to the coexistence of specialists and generalists in biological communities, in which generalists are capable of performing many activities poorly and specialists can perform a restricted range of activities well.

[6] Even the extreme altruism practiced by the Hutterites may be advantageous, since the Hutterite ideology and social organization effectively excludes the potential for freeloading (Wilson and Sober 1994).

[7] This thought experiment is similar to experiments in biology in which identical genotypes are placed in a range of environments and their phenotypes are measured. The phenotype/environment relationship is called a "norm of reaction" for that genotype and selection can operate among genotypes when they have different norms of reaction. In our case, we are measuring norms of reaction for belief systems rather than for genotypes. In general, the belief-system/behavior relationship is similar to the genotype/phenotype relationship, in the sense that belief systems (genotypes) constitute a set of rules from which behaviors (phenotypes) are derived.

[8] As the passage from Alcoholics Anonymous illustrates, other-oriented belief systems do distinguish between the "genuine" altruism that comes from wanting to help others and the "apparent" altruism that is really the pursuit of personal goals. However, "genuine" altruism remains genuine even after the altruist is rewarded with material, psychological and spiritual benefits.

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