

THE CURRENT EVIDENCE FOR HAYEK'S CULTURAL GROUP SELECTION THEORY

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Friedrich Hayek's views of the evolution of society and reason have often elicited strident denials, as Gerald Gaus notes in his contribution to *The Cambridge Companion to Hayek*. "A reader will find influential discussions in which his analysis is described as 'dogmatic,' 'unsophisticated,' and 'crude'" (2006:232). Indeed, Hayek's cultural group selection theory has been called "bizarre" (Steele 1987:172); "fatalistic," because his account of the cultural transmission of moral rules diminishes the role of individual reason making it such that "the best advice we can give is to wait and see" (Miller 1989:314); "anti-Austrian," because it supposedly opposes methodological individualism, the cornerstone of Austrian economics (Sechrest 1998, Vanberg 2001, Udehn 2001); and even "anti-liberal," because it is assumed to counter the fundamental ideas of David Hume, Adam Ferguson, and Carl Menger (Steele 1987:191–92; also see Gray 1986, Hodgson 1993, Khalil 1996, Paul 1988, Witt 1994).

To be sure, Hayek's cultural group selection theory has had its defenders (Boettke 1990, Caldwell 2000, Feser 2003, Gaus 2006, Yeager 1989), including several efforts displaying a fairly sophisticated understanding of contemporary evolutionary theory (Whitman 2004, Zywicki 2004). On the whole, however, these efforts have not done justice to recent advances in evolutionary theory, mostly within anthropology, archeology, psychology, and behavioral economics, sustaining and promoting cultural group selection

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theory. Hayek's views, I want to argue, have proven to be extremely prescient. In the last decade or so cultural group selection theory within the behavioral and social sciences has shifted from being a novel, almost "bizarre," theory to being what is a widely-held, increasingly orthodox, theory. I will proceed by first characterizing Hayek's cultural group selection theory and by then describing the evidence and theoretical advances in evolutionary thinking about our species which sustain Hayek's views. I conclude with a few comments about Hayek as a libertarian and the implications of contemporary cultural group selection theory for several libertarian issues.

Hayek on Cultural Group Selection

Hayek developed his theory of cultural group selection over the course of almost three decades and, although his thinking refined on the issue, his views were very consistent. The theory was explicated mainly in *The Constitution of Liberty* (1960:54–70), an essay titled "Notes on the Evolution of Systems of Rules of Conduct" (1967:66–81), the first (1973) and third volumes (1979) of *Law Legislation and Liberty*, a 1983 lecture on the "Origins and Effects of our Morals" given at the Hoover Institution (1984:318–330) and *The Fatal Conceit* (1988:6–28). Although I will immediately flesh out his theory by commenting on the relevant sections of each of these works in turn, I will commence by summarize the theory in propositional form.

1. Cultural evolution, unlike biological evolution, is of acquired characteristics.
2. Human genes and culture coevolve. They develop concurrently, not successively.
3. Psychological capacities such as imitation and social learning make the transmission of cultural traits possible.
4. Most important among the cultural traits transmitted are common rules or social norms that allow individuals to predict what unknown others within their group will do in different circumstances. Such rules provide (social) order.
5. The rules of the social order which are preserved over long periods of time and become traditional are selected for through competition with adjacent groups. Cultural selection is a form of group selection.
6. The traditions preserved through cultural group selection are different from, and often at odds with, the instincts selected for by biological evolution. Our capacities for culture and for identifying with groups, including individuals who are neither family nor friends, create dilemmas for us—conflicting thoughts, emotions and allegiances.

7. The traditions preserved through cultural group selection make individual reason possible and are superior to individual reason. Culture allows adaptations to conditions of which the individual mind could never be aware.
8. Although biological evolution and cultural evolution differ, especially regarding the speed at which they occur, both rely upon the same principle of selection. All evolution is concerned with survival and reproductive advantage.

Hayek's comments in *The Constitution of Liberty* are brief and, according to Bruce Caldwell (2000:120), may have been inserted into the manuscript during the winter of 1958–1959 after Hayek participated at the University of Chicago in the year-long Darwin Centennial Celebration (celebrating the 100 year anniversary of the publication of *The Origin of the Species*). Hayek discusses what he calls “social evolution,” not cultural evolution, but he links social evolution to the idea of the “spontaneous order” (using the term for the first time) as developed by David Hume, Adam Smith, and Adam Ferguson—the view that “purposive institutions might grow up which owe little to design, which were not invented but arose from the separate actions of many men who did not know what they were doing” (1960:58–59)—and he contrast this view with French rationalist thought. In addition, for the first time (1960:59) but hardly the last (1979:154, 1984:319–320, 1988:23–24) Hayek notes that the theory of social evolution is older than Darwin's theory of biological evolution and influenced Darwin's thinking. He also maintains that with social evolution “the decisive factor is not the selection of physical and inheritable properties of individuals but the selection by imitation of successful institutions and habits...the whole cultural inheritance which is passed by learning and imitation” (1960:59). He asserts, “the evolutionary view is based on the insight that the result of experimentation of many generations may embody more experience than any one man can possess” (1960:62).

Although he calls it “social evolution” in *The Constitution of Liberty*, it is clear that what are selected for over generations are cultural practices that surpass individual reason and behavior. In both “Notes on the Evolution of Systems of Rules of Conduct” and *Rules and Order: Law, Legislation, and Liberty* Hayek elaborates upon these ideas. The human mind, he says, “perceives the rules of action of other people” and the “concrete individual action will always be the joint effect of internal impulses, such as hunger, the particular events acting on the individual (including the actions of members of the group) and the rules applicable to the situation thus determined” (1967:67). By “rules” Hayek means a regularity in the behavior of an individual be the regularity the result of inherited or learned traits (1967:66–67). Not all rules are the same, however. Some rules are part of the “order” of a group because

they allow observers to make predictions about unknowns within the group (1967:67–69). Some groups, Hayek argues, have rules preserved within their orders that are “beneficial” and such groups “will have an advantage in the constant struggle with adjacent groups” (1967:71). Individuals may not be aware of their advantageous customs but “groups of individuals which have thus behaved have displaced those which did not do so” (1967:70). Beneficial rules are selected for by group competition and by differential survival and displacement.

The natural or spontaneous selection of rules is not the only means by which order can be maintained. Order can also be man-made or artificial. Whereas the spontaneous order is composed of “rules of just conduct satisfying general expectations” or “rules that aim at an abstract order with largely unpredictable benefits” (1973:135, 140)—what Hayek calls “cosmos”—artificial order is composed of “rules of organization,” rules that are consciously designed and imposed top-down within a centralized political hierarchy—what Hayek calls “taxis.” The artificial order of organization, Hayek says, is implicit in socialist or totalitarian ideologies (1973: 134), whereas “Classical liberalism rests on the belief that there exist discoverable principles of just conduct of universal applicability which could be recognized as just irrespective of the effects of their application on particular groups” (1973:141). In the modern world a liberal social order promotes spontaneous order and cultural group selection of beneficial rules far better than the artificial order of taxis. For most of human history, however, a liberal social order can not be said to have existed, but, at the same time, given the weak and dispersed nature of any political power that existed, taxis was impossible. Consequently, cultural group selection occurred largely unfettered for most of human existence.

The first and third volumes of *Law, Legislation and Liberty* were published six years apart during which time “sociobiology” emerged and generated a wave of controversy. In a section titled “the errors of sociobiology” in the epilogue of the third volume, Hayek criticizes G.E. Pugh’s *The Biological Origin of Human Values* (1977), a book, Hayek notes “which has received great praise from the recognized head of this school, Professor Edward O. Wilson of Harvard University”(1979:153). Pugh maintains that there are only two kinds of human value: primary values, “which are genetically determined,” and secondary values, “the products of rational thought.” Pugh’s analysis, Hayek says, mistakenly treats evolution “as solely a genetic process...completely forgetting about the similar but much faster process of cultural evolution that now dominates the human scene and presents to our intelligence problems it has not learnt to master” (1979:154). “Culture,” Hayek says, “is neither natural nor artificial, neither genetically

transmitted nor rationally designed” (1979:155). Culture is not the result of human reason “but of a process in which reason and culture develop concurrently” (1979:155). Indeed, Hayek says, we know now “that acquired cultural traits may effect physiological evolution—as is obvious in the case of language: its rudimentary appearance undoubtedly made the physical capacity of clear articulation a great advantage, favoring genetic selection of a suitable speech apparatus” (1979:155–56). Genes and culture coevolve: culture is among the factors selecting our genotype.

In the last decade of his life Hayek honed his theory of cultural evolution and was more explicit about how cultural evolution differs from organic evolution. In his Hoover Institution lecture, he says “Next to the fact that [cultural evolution] rests of course on the inheritance of acquired characteristics, the most important [difference] seems to me now that cultural evolution is founded wholly on group selection, which in biological evolution seems to play only a minor role, if that. My chief contention will be that we owe to this fact that in some respects our morals endow us with capabilities greater than our reason could do, namely the ability to adapt to conditions of which the individual mind could never be aware” (1984:318). The tradition of moral rules contains adaptations to our environments that are not “accessible by individual observation” or reason, making it “superior” to individual reason alone (1984: 320). According to Hayek, “the two crucial groups of rules of conduct” that are beyond the grasp of reason and are the product of cultural selection “were those of several property...and those concerning the family” (1984:321). Such rules have “essentially the character of faiths” (1984:324).

In *The Fatal Conceit* Hayek dwells further on the moral rules of human conduct and he discusses the family in terms at least subtly different from his Hoover lecture. He distinguishes between “morality” and “natural morality.” Morality is the product of cultural group selection and includes rules “of several property, honesty, contract, exchange, trade, competition and privacy” (1988:12). Natural morality, on the other hand, results from organic or biological evolution and was formed in the face-to-face roving bands in which humans spent most of their existence. “These genetically inherited instincts served to steer the cooperation of the members of the troop, a cooperation that was, necessarily, a narrowly circumscribed interaction of fellows known to and trusted by one another” (1988:11). Foremost among these instincts are “instincts of solidarity and altruism,” instincts that continue to exhibit beneficial consequences when focused upon family and friends but which, when unmodified, “oppose the morality of the extended order. As Hayek says, “the gradual replacement of innate responses by learnt rules increasingly distinguished man from other animals” (1988:16–17). The

extended order and the “suborders within which old instinctual responses” retain their importance (voluntary cooperation, friendship, family) coexist and create difficulties for us as we navigate between them. “[W]e must constantly adjust our lives, our thoughts and emotions, in order to live simultaneously within different kinds of orders according to different rules” (1988:18). These orders, however, must remain distinct. “If we were to apply the unmodified, uncurbed rules of the micro-cosmos (i.e., of the small band or troop, or of, say, our families) to the macro-cosmos (our wider society) as our instincts and our sentimental yearnings often make us wish to do, *we would destroy it*. Yet, if we were to always apply the rules of the extended order to our more intimate groupings, *we would crush them*” (1988:18).

The rules of conduct included within the morality of the extended order, preserved by tradition, and selected for in group competition, Hayek says lie between instinct (natural morality) and reason. “What we call mind is not something that the individual is born with, as he is born with a brain, or something the brain produces, but something that his genetic equipment ... helps him to acquire, as he grows up, from his family and his adult fellows by absorbing the results of tradition that is not genetically transmitted” (1988:22). As he has asserted elsewhere, Hayek says that cultural evolution is of acquired characteristics—“it simulates Lamarckism”—and it operates through group selection (1988:25). Despite these differences with biological evolution, however, Hayek says “both rely on the same principle of selection: survival and reproductive advantage. Variation, adaptation and competition are essentially the same kind of process, however different their particular mechanisms, particularly those pertaining to propagation” (1988:26).

As we turn to the current state of cultural group selection theory, I will not organize my comments by discussing each of the eight propositions described above. Doing so would give the false impression that contemporary researchers are explicitly seeking to verify Hayek’s theory. Nonetheless, we will see that each of these propositions is reasserted and that the evidence for these propositions is quite persuasive.

The Current Evidence for Cultural Group Selection

Eric Angner (2002) has traced the possible influences upon Hayek and his cultural group selection theory. He argues that Alexander Carr-Saunders, an Oxford-trained biologist turned sociologist and a close colleague of Hayek’s at the London School of Economics between 1937 and 1949, was the chief source of inspiration for Hayek’s views and that three other Oxford-trained biologists, Julian Huxley, Alister Hardy, and Vero Wynne-Edwards also influenced Hayek. Angner’s argument is enlightening but, in

fact, until 1966 group selection was regularly and widely invoked by biologists. Indeed, Darwin himself described group selection as the mechanism accounting for human morality. In *The Descent of Man* he said that moral superiority might give an individual and his children a small advantage over other members of his tribe but a number of individuals “possessing in a high degree the spirit of patriotism, fidelity, obedience, courage and sympathy” within a tribe would give that tribe a large advantage over other tribes and this, Darwin said, “would be natural selection. At all times throughout the world tribes have supplanted other tribes...” (1871:166).

Among biologists, however, group selection theory became virtual anathema for several decades after the publication in 1966 of *Adaptation and Natural Selection* by George Williams. Wynne-Edwards, who had recently published a book (1962) explaining a variety of apparently altruistic avian behaviors, was among those Williams criticized most harshly. Building upon the work of William Hamilton (1964), Williams criticized the idea of altruistic behavior towards non-kin. He showed, for example, that among a flock of birds if an individual bird were to alert that flock to an approaching predator, the flock would indeed have an advantage over other flocks lacking such an alert calling bird. Within that flock, however, non-alert calling individuals would be more likely to survive and reproduce than the altruistic bird. Within-group selection would overwhelm between-group selection.

It was in consideration of such things that Hayek, late in his career, was so adamant about distinguishing between cultural group selection and biological group selection and making clear that his concern was with the former not the latter. It is worth noting, though, that in recent years biological group selection has made something of a comeback. Indicative of this comeback is the fact that Edward O. Wilson, the author of *Sociobiology* (1975) and arguably the most important evolutionary thinker in America today, recently coauthored an article defending biological group selection or “multilevel selection” with David Sloan Wilson, who had labored virtually alone among biologists for decades arguing for the viability of biological group selection. The concluding three sentences of their article are worth quoting. “Selfishness beats altruism within groups. Altruistic groups beat selfish groups. Everything else is commentary” (2007:345).

Biologists have known for some time (Price 1970, 1972) that it is theoretically possible for between-group selection to override within-group selection and the proof is in the empirical pudding. I should note, though, two conditions that must obtain for group selection of gene frequencies in populations to occur, with specific reference to humans. First, some groups must become extinct. As George Williams once said, to prefer group selection to individual selection is to prefer genocide to murder (quoted in

Ridley 1996:193). As disturbing as this condition is, the archeological and anthropological evidence for violence among band and village societies makes meeting this condition plausible (LeBlanc 2003). The second condition, however, is much less plausibly met and that is that migration between groups can not occur. Even if one concedes the possibility of extreme violence among our ancestors, it is extremely unlikely that conquering males would have killed young conquered females rather than copulate with them and assimilate them into their groups.

As I will explain below, neither of these condition must obtain for cultural group selection to occur. As noted above, while Hayek's views were peculiar, almost singular, during the last several decades of his life, cultural group selection theory has seen an extraordinary revival in the behavioral and social sciences over the last decade, although the resurgence actually commenced in 1985. In that year, Robert Boyd and Peter Richerson published *Culture and the Evolutionary Process*, which more than any other work sparked the resurgence in cultural group selection theory. Both Boyd and Richerson trained as biologists but Boyd is now an anthropologist at UCLA and Richerson is a professor in the Department of Environmental Science at UC-Davis. Other prominent thinkers who have contributed to this resurgence include, but are not limited to, the anthropologists Richard McElreath, Joseph Henrich and Natalie Henrich (Henrich and McElreath 2003, Henrich and Henrich 2007), the archeologist Stephen Shennan (2002), the psychologists Michael Tomesello (1999, 2009) and Jonathan Haidt (2006, 2007), the behavioral economists Samuel Bowles, Herbert Gintis and Ernst Fehr (Fehr and Gächter 2001, Henrich et al. 2004, Gintis et al. 2005), and the philosophers Eliot Sober (Wilson and Sober 1998), Kim Sterenly (2003) and Richard Joyce (2006). Although I will draw from many of these thinkers I will focus mainly upon Boyd and Richerson in order to convey the current state of cultural group selection theory.

Boyd and Richerson's approach is known as "gene-culture coevolution" or as "dual inheritance" theory. Just as Hayek stressed the importance of the concurrent evolution of human genes and culture, so do Richerson and Boyd. They say, "Each partner in the coevolutionary dance influences the dynamics of the other. Genetically evolved biases steer cultural evolution in genetic-enhancing directions. Culturally evolved traits affect the relative fitness of different genotypes in many ways" (2004:193). In fact, the role of culture in human genetic evolution has been shown recently to be a very profound factor. John Hawkes and several colleagues have employed a new genomic technique and have demonstrated that the pace of human genetic evolution has sped up in the last 40,000 years, especially since the onset of the Neolithic age, some 10,000 years ago (Hawkes et al. 2007). They

assert that the rate of genetic change over the last 10,000 years is 100 times faster than the average rate of change for any 10,000 year time period over the last six million years since we last shared an ancestor with the chimps. Our culture is the single most important environmental factor driving recent human genetic evolution. Indeed, it is clear that a gene-focused approach to human evolution that completely neglects human culture could not even understand the genetic make-up of our species.

In terms very similar to Hayek's, Richerson and Boyd define culture as "information capable of affecting an individual's behavior that they acquire from members of their species through teaching, imitation or other forms of social transmission" (2004:5). They maintain that culture and genes coevolve through natural selection—differential survival and reproduction. As Richard Joyce observes, there is no reason to assume that natural selection would operate exclusively on genes because "Darwin articulated the theory [of natural selection] beautifully while remaining utterly ignorant of genes. So long as there is variation, heritability, and trait dependent differential reproduction, then there will be natural selection" (2006: 41–42). Cultural variants share these features with genes. Culture varies, is transmitted from generation to generation, and the phenotypic differences created by culture affect whether or not cultural variants are transmitted. Nonetheless, Richerson and Boyd argue that genes and culture are still quite distinct forms of inheritance. There is a measure of choice among cultural variants completely absent in genetic transmission; culture, especially institutional rules and practices, is much more complex than genes; and the transmission of cultural variants lacks the fidelity of genetic transmission

Culture has been documented to exist in several bird and monkey species, all the great apes, dolphins and whales. Only humans, however, have complex cumulative culture. In terms, again, very reminiscent of Hayek's, Richerson and Boyd say "the single most important feature of [human] culture is that it allows the gradual, cumulative assembly of adaptations over many generations, adaptations that no single individual could evoke on his or her own" (2004:45). As Michael Tomesello puts it, "This produces a kind of cultural ratchet, as each version of the practice stays solidly in a group's repertoire until someone comes up with something even newer and more improved" (2009:xi). We do not know when complex cumulative culture began but we know it has allowed humans to inhabit a variety of environments far more numerous than any other vertebrate species. Our species began to migrate out of Africa some 60,000 years ago and we inhabited every continent except Antarctica by 20,000 years ago.

Cultural variants, like genes, are naturally selected but Boyd and Richerson join Hayek in maintaining that the main mechanism by which

culture has been selected is through group selection. As noted above, in biological group selection, some groups must become extinct and there can be no migration between groups. In cultural group selection literal extinction is not necessary and large between-group migration can occur because of cultural assimilation. According to Boyd and Richerson (2006), cultural group selection can transpire if and when group disruption and dispersal is common; new groups form from previous groups; and there is variation among groups that affects the likelihood of groups to survive and produce daughter groups. Additionally, cultural transmission minimizes within group variation, while between group differences can be very large, two circumstances that facilitate cultural group selection.

Richerson and Boyd say that complex cumulative culture coevolved with what they call “tribal social instincts,” instincts that allow humans to identify with and make common cause with a sizable culturally defined set of distantly related individuals, including from a few hundred to a few thousand people. They speculate that the tribal social instincts were an adaptation to the rapid and dramatic climate variation of the late Pleistocene and that most humans lived in tribal societies by 100,000 years ago. The tribal social instincts “were superimposed onto human psychology without eliminating those that favored friends and kin,” what they call the “ancient social instincts” (2004:215). Richerson and Boyd say, “Cultural evolution created cooperative, symbolically marked groups. Such environments favored the evolution of a suite of new social instincts suited to life in such groups, including a psychology which ‘expects’ to be structured by moral norms and is designed to learn and internalize such norms; new emotions, such as shame and guilt, which increase the chance that norms are followed; and a psychology that ‘expects’ the social world to be divided into symbolically marked groups...Cooperation and group identification in inter-group conflict set up an arms race that drove evolution to ever greater extremes in in-group cooperation” (2004: 214). They further argue that about 5,000 years ago societies with many thousands of people emerged that accommodated the more particularistic tribal social instincts through “work-arounds” that mobilized the tribal social instincts for new purposes (2004:231). Within our circumstance, many work groups, voluntary associations and religious congregations would be examples of “work-arounds” (2004: 229–31).

According to Boyd and Richerson symbolic markers “function to allow individuals to interact with others who share their social norms” and they demonstrate using a simple mathematical model that symbolically marked groups can arise and persist if three conditions are met (2006:118–31). (1) Norms regulate interactions in such a way that individuals sharing beliefs about how people should behave have higher pay-offs than interactions with

individuals who have divergent beliefs. (2) People preferentially interact with others with whom they share an easily observed trait, such as style of dress. (3) People imitate successful people because in that way behaviors with higher pay-offs spread. These conditions may be needed to maintain symbolically marked groups but the propensity of humans to create social norms so that they can predict unknowns within their groups and create order and social institutions within those groups, is a fundamental and uniquely human trait. As Michael Tomasello observes, “no animal species other than humans has been observed to have anything even vaguely resembling [social institutions]” (2009: xii). He says, “the kinds of collaborative activities in which young children ...engage are the natural cradle of social norms of the cooperative variety” (2009: 89). Children “form with others joint goals to which both parties are normatively committed, they establish with others domains of joint attention, and they create with others symbolic, institutional realities that assign deontic powers to otherwise inert entities” (2009: 105).

According to Boyd and Richerson, “At least two cultural processes can maintain multiple stable equilibria” within groups: “(1) Conformist social learning (2) and moralistic enforcement of norms” (2006:261). Regarding the first, we do not assimilate or imitate just anything we observe. We are disposed in fast and frugal ways that bias social transmission. “Rules like ‘copy the successful,’ ‘copy the prestigious,’ or ‘copy the majority’ allow individuals to acquire rapidly and efficiently adaptive behaviors across a variety of circumstances...” (Richerson, Boyd and Henrich 2003:365). Humans “preferentially adopt some cultural variants rather than others” (Richerson and Boyd 2004:68), which enhances conformist learning. Regarding the second, behavioral economists have now conducted hundreds of experiments demonstrating that “people punish non-cooperators at a cost to themselves even in one shot interactions and ethnographic data suggest that such altruistic punishment helps sustain cooperation in human societies” (Boyd and Richerson 2006:241). As Fehr and Gächter (2001) found, cooperation breaks down in circumstances in which punishment is not possible. They maintain that the “proximate source of the punishment” is not a calculation of ultimate interest but, rather, “negative emotions” such as resentment toward free riders. The findings of behavioral economists do not fit with the selfish hypothesis of rational-choice theory and in order to see if these results represent something distinctively Western, Henrich et al. (2004) undertook studies, employing the ultimatum and public goods games, to analyze three foraging societies, six horticultural societies, four herding societies, and two small-scale agricultural societies. They found that individuals in these societies were no more likely than Western subjects to maximize their material interests, at the expense of others. They did find

differences among these fifteen societies in pro-social behavior but these differences result from the degree of market integration: as Hayek would have predicted, the greater the market integration, the greater the pro-social behavior.

In order to avoid the impression that all evolutionary thinkers are now advocates of cultural group selection theory, I should note that many “evolutionary psychologists” doubt the social transmission of culture. For example, John Tooby and Leda Cosmides (1992), two very prominent evolutionary psychologists, argue that what is called culture and is believed to be socially transmitted is in fact the expression of organically evolved mental modules “evoked” by variable environments. By this reasoning, someone from sub-Saharan Africa transported to an Inuit habitat unaided, for example, would have his or her kayak module evoked and would know how to make a kayak. To such thinking Richerson and Boyd say, “Are you nuts?” (2004:46). Similarly, several founders of sociobiology, including Richard Dawkins and George Williams (but not Edward O. Wilson), believe that our concern for people within our groups who are neither friends nor kin, is a mistake from the gene’s perspective, a vestige of the fact that the context in which humans lived for most of their evolutionary past included only family (preferred by kin altruism) and friends (preferred by reciprocal altruism). In this view, we lack the power to discriminate and are mistakenly generous to non-family and non-friends. Neither common observation nor experimental evidence supports these claims, however. We have an extraordinarily refined capacity to discriminate between family, friends, in-group acquaintances, and out-group strangers (Berreby 2005). Indeed, the very distinction between kin altruism and reciprocal altruism, to which certain sociobiologists wish to attribute all prosocial behavior, relies upon the capacity to categorize and discriminate in one’s behavior (Stone 2008: 147).

A significant consequence of the denial of our tribal social instincts and our ultrasociality is that the conflicting thoughts, emotions, and allegiances about which Hayek wrote, get washed away as well. In fact, both Richard Dawkins and George Williams have argued that nature is pitiless and cruel—selfish and nepotistic—and that morality is somehow disconnected from nature. On the concluding page of *The Selfish Gene* (1976:215) Dawkins says that we can use our conscious foresight “to rebel against the tyranny of selfish replicators” or genes. He says that our foresight can be used to cultivate “pure disinterested altruism—something that has no place in nature.” Meanwhile, Williams says “With what other than condemnation is a person to respond to a system in which the ultimate purpose of life is to be better than your neighbors at getting your genes into future generations, in which those your successful genes provide the message that instructs the

development of the next generation, in which the message is always ‘exploit your environment, including your friends and relatives, so as to maximize our (genes’) success,’ in which the closest thing to the golden rule is ‘don’t cheat, unless it is likely to provide a net benefit’”(1997:154). As I have argued elsewhere (Stone 2008), Dawkins and Williams commit what Daniel Dennett in *Darwin’s Dangerous Idea* (1995) calls a grave sin against Darwinian reasoning: they employ “skyhooks—miraculous lifters, literal supernatural explanations—when confronting a difficult problem. Their difficulty, however, results from the fact that they refuse to acknowledge the tribal social instincts and our groupish nature. The day-to-day moral dilemmas we face result from conflicting motives and commitments we have toward ourselves, our families, our friends and our social groups, just as Hayek argued. We certainly have self-regarding, nepotistic, and cronyistic desires that are typically more potent than our loyalty to our larger social groups but that is precisely why moral and social rules typically seek to sustain the tribal social instincts against the tug of selfishness and the ancient social instincts.

According to Boyd and Richerson, our cumulative culture, tribal social instincts, social institutions, and moral systems coevolved in a mutually reinforcing ratcheting process. As cumulative culture became more pronounced, the tribal social instincts, social institutions, and morality were enhanced. As the social tribal instincts became more extensive, our capacity for cumulative culture, social institutions, and morality were augmented, etc. According to contemporary cultural group selection theorists these four features also coevolved with at least four other uniquely human features—“theory of mind,” our capacity to imitate, language, and religion—in a mutually reinforcing ratcheting process.

What cognitive scientists call theory of mind, is the human capacity to understand other minds by assuming their perspective. Specifically, it allows humans to imagine several orders of intentionality. For example, “*I* thought that *you* believed that *I* was going to take *you* to the store” would have four levels of intentionality. Theory of mind gives us the ability to imagine the mental states of others but it also equips us to deceive others, which in turn has created selection pressures to detect deception. “Mind reading facilitates deception and deception encourages mind reading” (Smith 2004:350). Additionally, theory of mind allows us to be self-aware and to be self-reflective. As Robin Dunbar says, “the real breakthrough is where fully developed third order ToM allows us to imagine how someone who does not actually exist might respond to a particular situation” (1996:102). It allows us to judge ourselves with a measure of disinterest by assuming the perspective of someone else or of no one in particular. Theory of mind is exactly what Adam Smith described as “sympathy”—“changing places in fancy”—which

provides us with “the man in the breast” or the “impartial spectator” ([1790] 1982: 9–113). In any event, it is impossible imaging our extensive sociability, cumulative culture or morality without our “theory of mind.” According to Richerson and Boyd , it is also required for observational leaning and imitation, which in turn are essential to assimilating complex cumulative culture and social norms (2004:136–39).

A recent collection of essays by cognitive scientists (Hurley and Chater 2005) describes imitation as “a rare ability that is fundamentally linked to characteristically human forms of intelligence, in particular to language, culture and the ability to understand other minds” (quoted in Iacoboni 2008: 43). Human newborns as young as 41 minutes old imitate rudimentary manual and facial features (Iacoboni 2008:47–48) and despite our use of the term “ape” as a verb, humans have an unparalleled ability to imitate. In the last 15 years we have come to a much better understanding of the neurological basis of this ability. Although they were first identified by accident in monkeys, humans are richly endowed with what are called “mirror neurons” which are located in parts of the brain important for motor behavior. Mirror neurons are a subset of brain cells that discharge both when we are performing an act and when we are observing the same act performed by someone else. To quote Marco Iacoboni, they “fire when an individual kicks a soccer ball, sees a ball kicked, hears a ball being kicked, and even just says or hears the word “kick”...(2008:12). We are hardwired to imitate, to synchronize our bodies and actions with others, for empathy, and for the ability to grasp the intentions of others. We are quite simply exquisitely social beings.

Michael Tomasello has demonstrated that children first pick up the concrete expressions of their language through imitation (2000). Regarding the origins of language in our species, Robin Dunbar (1996) is rather famous for proposing that language emerged in our species as a social lubricant once our species lived in groups too large to use the typical primate social lubricant of grooming. Gossip, he argues, replaced grooming in our species. This is all very speculative but he has demonstrated that among primate species, the neo-cortex ratio (the size of the neo-cortex divided by body weight) correlates perfectly with group size. Humans have by far the largest neo-cortex ratio and by far the largest societies. As Richerson and Boyd note, “Language is also an extraordinarily powerful device for encoding and transmitting some kinds of cultural traditions, particularly myths and stories that often carry much information about social roles and moral norms” so “even if language first evolved to gossip about band politics, it could have then been elaborated, because it made more-complex cultural traditions possible by making it easy to express, memorize and teach cultural principles

verbally” (2004:144–45). It is possible that language preceded cumulative culture but which ever came first they coevolved in a ratcheting manner. Of course, language also has been a very important force in maintain group identities and boundaries. It has often marked and separated different symbolic groups.

Regarding religion, Pascal Boyer (2003) has said “Concepts of gods and ancestors with whom you can interact require a minor but consequential ‘tweaking’ of standard theory of mind” (quoted in Wade 2009: 63). Theory of mind allows us to imagine someone who does not exist, including supernatural agents. Religion could be a by-product of the psychological mechanisms we developed in order to maintain our rich social lives. Still, religion itself provides selective advantages to practitioners. As Nicholas Wade observes, “Many of the social aspects of religious behavior offer advantages—such as a group’s strong internal cohesion and high morale in warfare—that would lead to a society’s members having more surviving children, and religion for such reasons would be favored by natural selection” (2009:12). Religion, Wade argues, is chiefly about group cohesion. Speaking of analyses of three foraging societies—the !Kung San, the Adaman Islanders, and Australian Aborigines—Wade asserts that “religion was a major part of their daily lives. Religious practice involved all-night ceremonies with vigorous singing and dancing and intense emotional involvement. The emphasis was on ritual rather than belief...And the central purpose of the rites was to bind the community together and fortify the social fabric” (2009:118). Religion binds a community together, while providing a shield against other groups, and, of course, in many societies it is a very important adjunct in efforts to enforce social and moral norms. As David Sloan Wilson says in *Darwin’s Cathedral: Evolution, Religion and the Nature of Society*, for all of his “fuzziness” and lack of scientific rigor, Emile Durkheim was on the right track when he defined “Religion [as] a system with a purpose—to unite a human group into a single moral community—in which sacredness features as an essential mechanism” (2002: 222).

Conclusions

Although current cultural group selection theorists seem oblivious to Hayek, I believe the eight propositions used to summarize Hayek’s theory above have been reasserted by contemporary group selection theorists and that the evidence for these propositions today is much stronger than when Hayek announced his theory. Again, I believe Hayek’s cultural group selection theory was extremely prescient.

I would like to think that most readers of *Libertarian Papers* would have an interest in the current evidence for Hayek's cultural group selection theory even if it had little bearing on issues of direct importance to libertarians but I will conclude with a few comments about Hayek as a libertarian and the significance of contemporary cultural group selection theory for several issues important to libertarians. Many of the critics of Hayek cited in the first paragraph of this essay are libertarians who seem put off by Hayek's convictions concerning human sociability and our propensity to affiliate in groups. This strikes me as odd, likely resulting from a confusion of society and polity. The two are very different, however. The issue confronting libertarians is not one of "man (or woman) versus the state" but one of "men and women versus the state." The isolated individual does not combat the concentration of state power; isolated individuals make the concentration of state power possible. The evidence, I believe, supports Tocqueville [1835/1840] 2000) who argued that "individualism" fosters political centralization and that political centralization fosters "individualism," while a vibrant civil society composed of a welter of free associations combats both simultaneously. Libertarians, it seems to me, should be reliant anti-statists who demonstrate their anti-statism by seeking to fortify the social order. Hayek was such a libertarian. He wished to protect the spontaneous order and civil society in order to combat the over-weaning state.

Still, Hayek's cultural group selection theory and the evidence provided by current cultural group selection theorists are irrelevant to certain libertarian criticisms of Hayek. To take one well-known example, Walter Block (1996) has criticized Hayek for his being "lukewarm in his support of laissez-faire capitalism" (1996:339) because of his support of government limitations on working hours, his tepid criticisms of rent control, and for his support of government assistance to individuals to help them get health and accident insurance, among other things. The truth or falsity of these assertions is completely independent of the soundness of Hayek's theory of cultural group selection or the current state of the theory. In arguing here that the evidence generated by contemporary cultural group selections theorists supports Hayek I mean only to suggest that it sustains Hayek's cultural group selection theory, not everything Hayek asserted. At the same time, though, I do believe that the current state of cultural group selection theory and the empirical evidence it has generated provide generous support for Hayek against certain criticisms. To take another well-known example, the libertarian Larry Sechrest (1998) has argued that the rational or ethical egoism of Ayn Rand is superior to Hayek's evolutionary approach, that Hayek's views are wanting because Hayek "is not a consistent methodological individualist" (1998:57), and that "Hayek's rejection of reason in favor of traditions and customs is a grievous error" (1998:54). I believe that at this

point the evidence gathered by group selection theorists vindicates Hayek on these counts and that Sechrest and those who share his views are misguided. We are exquisitely social beings and anyone who seeks to understand our species by denying that fact and by seeking to ground the study of humans in rational egoism is doomed to failure. Individual reason is certainly real but it is always limited by historical and cultural context and it can not exist without cumulative human culture binding individuals. As Hayek stressed, however, human sociability depends as much on human differences as it does on what binds us. In the words of Matt Ridley—a devotee of both Darwin and Hayek—sometime in the last 200,000 years “Human beings had started to do something to and with each other that in effect began to build collective intelligence. They started, for the first time, to exchange things between unrelated, unmarried individuals; to share, swap, barter and trade”(2010:56). There is no master mind or central planning agency but there is collective intelligence in the form of dispersed, specialized knowledge made possible by the division of labor and exchange, just as Hayek argued. Better than anyone else, Hayek described the distinct human capacities basic to our sociability, some allowing shared norms and common culture, others making market coordinated self-interested, yet mutually beneficial, activities possible. The isolated and independent human individual, devoid of social interest and mutual dependence, is a fanciful fiction.

References

- Angener, E. (2002) “The History of Hayek’s Theory of Cultural Evolution.” *Studies in History and Philosophy of Science* 33: 695–718.
- Berreby, D. (2005) *Us and Them: Understanding Your Tribal Mind*. New York: Little, Brown and Company.
- Block, W. (1996) “Hayek’s Road to Serfdom.” *Journal of Libertarian Studies* 12: 339–65.
- Boettke, P. (1990) “The Theory of Spontaneous Order and Cultural Evolution in the Social Theory of F.A Hayek.” *Cultural Dynamics* 3:61–83.
- Boyer, P. (2003) “Religious Thought and Behaviour as By-Products of Brain Function.” *Trends in Cognitive Neuroscience* 7: 119–24.
- Boyd, R. and P. Richerson. (1985) *Culture and the Evolutionary Process*. Chicago: University of Chicago Press.

- . (2005) *The Origin and Evolution of Culture*. New York: Oxford University Press.
- . (2006) “Solving the Puzzle of Human Cooperation.” In S. Levinson (ed.) *Evolution and Culture*. Cambridge MA: MIT Press.
- Caldwell, B. (2000) “The Emergence of Hayek’s Ideas of Cultural Evolution.” *Review of Austrian Economics* 13: 5–22.
- Darwin, C. (1871) *The Descent of Man, and Selection in Relation to Sex*. New York: Appleton.
- Dawkins, R. (1976) *The Selfish Gene*. Oxford UK: Oxford University Press.
- Dennett, D. (1995) *Darwin’s Dangerous Idea*. New York: Simon and Schuster.
- Dunbar, R. (1996) *Grooming, Gossip and the Evolution of Language*. Cambridge MA: Harvard University Press.
- Fehr, E. and S. Gächter. (2001) “Altruistic Punishment in Humans.” *Nature* 415:137–40.
- Feser, E. (2003) “Hayek on Tradition.” *Journal of Libertarian Studies* 17:17–56.
- Gaus, G. (2006) “The Evolution of Society and Mind: Hayek’s System of Ideas.” In E. Feser (ed.) *The Cambridge Companion to Hayek*. Cambridge UK: Cambridge University Press, pp. 232–58.
- Gintis H., and S. Bowles, R. Boyd and E. Fehr. (2006) *Moral Sentiments and Material Interests: The Foundations of Cooperation in Economic Life*. Cambridge MA: MIT Press.
- Gray, J. (1986) *Hayek on Liberty*. 2nd edition. Oxford UK: Blackwell.
- Haidt, J. (2006) *The Happiness Hypothesis: Finding Modern Truth in Ancient Wisdom*. New York: Basic Books.
- . (2007) “The New Synthesis in Moral Psychology.” *Science* 18:998–1002.
- Hamilton W. (1964) “The Genetical Theory of Social behavior: I and II. *The Journal of Theoretical Biology* 7:1–32.
- Hawkes, J., E. Wang, G. Cochran, H. Harpending, and R. Moyziz. (2007) “Recent Acceleration of Human Adaptive Evolution.” *Proceedings of the National Academy of Science* 104: 20753–20758.
- Hayek, F.A. (1960) *The Constitution Of Liberty*. Chicago: University of Chicago Press.

- . (1967) *Studies in Philosophy, Politics and Economics*. London: Routledge & Kegan Paul.
- . (1973) *Rules and Order: Law, Legislation and Liberty*. Chicago: University of Chicago Press.
- . (1979) *The Political Order of a Free People: Law, Legislation and Liberty*. Chicago: University of Chicago Press.
- . “The Origins and Effects of Our Morals.” In C. Nishiyama and K. Leube (eds.) *The Essence of Hayek*. Stanford: Hoover Institution Press.
- . (1988) *The Fatal Conceit*. Chicago: University of Chicago Press.
- Henrich J., R. Boyd, S. Bowles, C. Cramerer, E. Fehr, and H. Gintis. (2004) *The Foundations of Human Sociality*. New York; Oxford University Press.
- Henrich, J. and R. McElreath (2003) “The Evolution of Cultural Evolution.” *Evolutionary Anthropology* 13: 123–35.
- Henrich, J. and N. Henrich (2007) *Why Humans Cooperate: A Cultural and Evolutionary Explanation*. New York: Oxford University Press.
- Hodgson, G. (1993) *Economics and Evolution: Bringing Life Back to Economics*. Ann Arbor: University of Michigan Press.
- Hurley, S. and N. Chater (2005) *Perspectives on Imitation: From Neuroscience to Social Science*. Cambridge MA: MIT University Press.
- Iacoboni, M. (2008) *Mirroring People: The Science of Empathy and How We Connect with Others*. New York: Picador.
- Joyce, R. (2006) *The Evolution Of Morality*. Cambridge MA: MIT University Press.
- Khalil, E. (1996) “Friedrich Hayek’s Darwinian Theory of Evolution of Institutions: Two Problems” *Australian Economic Papers* 29: 83–201.
- LeBlanc, S. (2003) *Constant Battles: The Myth of the Peaceful, Noble Savage* New York: St. Martin’s Press.
- Miller, D. (1989) “The Fatalistic Conceit.” *Critical Review* 3: 310–23.
- Paul, E. (1988) “Liberalism, Unintended Orders and Evolutionism.” *Political Studies* 36: 251–72.
- Price, G. (1970) “Selection and Covariance.” *Nature* 277; 520–21.
- . (1972) “Extensions of Covariance Selection Mathematics.” *Annals of Human Genetics* 35: 484–90.

- Pugh, G. E. (1977) *The Biological Origin of Human Values*. New York: Basic Books.
- Richerson, P. and R. Boyd . (2004) *Not By Genes Alone: How Culture Transformed Human Evolution*. Chicago: University of Chicago Press.
- Richerson, P., R. Boyd and R. Henrich. (2003) “Cultural Evolution of Human Cooperation.” In P. Hammerstein (ed.) *Genetic and Cultural Evolution of Cooperation*. Cambridge MA: MIT Press.
- Ridley, M. (1996) *The Origins of Virtue*. New York: Viking.
- . (2010) *The Rational Optimist*. New York: HarperCollins.
- Sechrest, L. (1998) “The Irrationality of the Extended Order: The Fatal Conceit of F.A. Hayek.” *Reason Papers* 23: 38–65.
- Sheenan, S. (2002) *Genes, Memes and Human History*. London: Thames & Hudson.
- Smith, A. ([1790] 1982) *The Theory of Moral Sentiments*. 6th edition. Indianapolis: Liberty Press.
- Smith, D. (2004) *Why We Lie: The Evolutionary Roots of Deception and the Unconscious Mind*. New York: St. Martin’s.
- Sober, E. and D.S. Wilson (1998) *Unto Others: The Evolution and Psychology of Unselfish Behavior*. Cambridge MA: Harvard University Press.
- Steele, R. (1987) “Hayek’s Theory of Cultural Group Selection.” *Journal of Libertarian Studies* 8:171–95.
- Sterelny, K. (2003) *Thought in a Hostile World*. Oxford UK: Blackwell.
- Stone, B. (2008) “The Most Unique of all Unique Species.” *Society* 45: 146–51.
- Tooby, J. and L. Cosmides (1992) “The Psychological Foundations of Culture.” In J. Barkow, L. Cosmides, and J. Tooby (eds.) *The Adapted Mind*. Oxford UK: Oxford University Press, pp. 19–136.
- Tocqueville, A. ([1835/1840] 2000) *Democracy in America*. Chicago: University of Chicago Press.
- Tomesello, M. (1999) *The Cultural Origins of Human Cognition*. Cambridge MA: Harvard University Press.
- Tomesello, M. (2000) “The Item-Based Nature of Children’s Early Syntactic Development.” *Trends in Cognitive Development* 4: 156–63.
- Tomesello, M. (2009) *Why We Cooperate*. Cambridge MA: MIT Press.

- Udehn, L. (2001) *Methodological Individualism: Background, History and Meaning*. London: Routledge.
- Vanberg, V. (2001) *The Constitution of Markets: Essays in Political Economy*. London: Routledge.
- Wade, N. (2009) *The Faith Instinct*. New York: Penguin.
- Whitman, D.G. (2004) "Comment on Group Selection and Methodological Individualism: Compatible and Complimentary." *Advances in Austrian Economics* 7: 221–49.
- Williams, G. (1966) *Adaptation and Natural Selection*. Princeton NJ: Princeton University Press.
- . (1997) *The Pony Fish's Glow*. New York: Basic.
- Wilson, D.S. (2002) *Darwin's Cathedral: Evolution, Religion and the Nature of Society*. Chicago: University of Chicago Press.
- Wilson, D.S. and E.O. Wilson (2007) "Rethinking the Theoretical Foundations of Sociobiology." *Quarterly Review of Biology* 82: 327–48.
- Wilson, E.O. (1975) *Sociobiology: The New Synthesis*. Cambridge MA: Harvard University Press.
- Witt, U. (1994) "The Theory of Societal Evolution: Hayek's Unfinished Legacy." In Birner, J and R. Van Zijp (eds.) *Hayek, Co-ordination and Evolution*, pp 178–89. London: Routledge.
- Wynne-Edwards, V. (1962) *Animal Dispersion in Relation to Social Behavior*. Edinburgh: Oliver and Boyd.
- Yeager, L. (1989) "Reason and Cultural Evolution." *Critical Review* 3:324–35.
- Zywicki, T. (2004) "Reconciling Group Selection and Methodological Individualism." *Advances in Austrian Economics* 7: 267–77.