



“Was Hayek Right About Group Selection After All?” Review Essay of *Unto Others: The Evolution and Psychology of Unselfish Behavior*, by Elliott Sober and David Sloan Wilson

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Abstract. One of the most controversial aspects of Hayek’s social theory was his acceptance of the concept of cultural group selection. The publication of *Unto Others: The Evolution and Psychology of Unselfish Behavior* provides an opportunity to revisit this much-maligned component of Hayek’s thought. Sober and Wilson are concerned with biological group selection, but much of their argument is equally applicable to cultural group selection. This essay revisits Hayek’s views on cultural group selection in light of the model proposed by Sober and Wilson. Comparing their model to Hayek’s model suggests that group selection theories are more plausible than traditionally thought and that their viability in any given situation is an empirical, not an a priori, question. So long as there are benefits to a group from greater levels of altruism and cooperation, and so long as free rider problems can be mitigated, group selection models are plausible.

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One of the most controversial aspects of Hayek’s writings on social theory was his acceptance of the concept of “group selection.”¹ The concept of group selection has proven itself equally controversial in the field of evolutionary biology. In both fields of study, group selection theories have been roundly criticized as at best trivial in importance and at worst fundamentally wrong-headed and obscurantist.

But perhaps this obituary for group selection is premature. Elliott Sober and David Sloan Wilson certainly believe that to be the case. In their new book, *Unto Others: The Evolution and Psychology of Unselfish Behavior*, they offer up a spirited defense of the concept of group selection in the context of evolutionary biology. Biological group selection and Hayekian cultural selection theories have been closely related throughout their histories and thus have shared a common fate.² To the extent that Sober and Wilson have provided a viable model of group selection in evolutionary biology, therefore, it is worthwhile revisiting the issue to see whether it provides insight and support for Hayek’s views on cultural evolution.

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Cultural and Biological Group Selection Reviewed

While Hayek never made completely clear the level of selection on which this competition was taking place, it seems that he had in mind some sort of competition between cultures or sets of moral and legal rules and institutions. Nor was Hayek ever completely clear about the mechanism for selection, whether superior sets of rules would spread to new adherents through voluntary acceptance or whether they would be imposed forcibly by conquest. Despite these ambiguities in the details, one thing is clear: Hayek saw some sort of cross-cultural competition taking place, where certain sets of norms, beliefs, and rules could prove themselves to hold a comparative advantage over others such sets of norms, beliefs, and rules. (Whitman 1998). While clearly present in his earliest writings, most notably Volume 1 of *Law, Legislation, and Liberty: Rules and Order* (Hayek 1972), Hayek's views on cultural evolution and group selection became most evident in his final work *The Fatal Conceit*.³ (Hayek 1988).

The skepticism of economists and social scientists toward Hayek's model of cultural evolution has been mirrored by the skepticism of evolutionary biologists towards the biological concept of "group selection." While the concept of group selection gained some currency in the 1960s, in subsequent decades it has been swept aside as the result of the rise of "selfish gene" theory as the dominant paradigm in evolutionary biology. Best typified in Richard Dawkins's classic work *The Selfish Gene* (Dawkins 1989), adherents to the selfish gene model argue that the basic level of selection is at the level of the individual gene and that individual human beings can be best understood as "survival machines," or collections of genes that work together to further their own propagation. (Dawkins 1989:24). Although it is not fully specified how this cooperation comes about, in this view the interests of these collections of genes come to be so interrelated that they come to share a mutual interest in the survival of the individual that carries those genes, such that what is good for the individual's survival and propagation also tends to be good for the genes. Actions that are bad for survival obviously will tend to lead to the premature death of the "survival machine" and with it the genes that it carries. Hence, such impulses will be weeded out of the gene pool.

Group selection models posit that individuals will sometimes act "altruistically," i.e., in ways that are good for others but detrimental to the individual. Much of this altruism can be explained through genetic relatedness, or "kin selection." (Hamilton 1964). Kin selection models posit that individuals will act altruistically towards others who share their genes with a particular set of genetic relatedness, even if there is a detriment to that "survival machine." Thus, for instance, a ground squirrel might be predicted to sacrifice herself by calling out an alarm to her siblings, even though such action makes it more likely that the predator will capture and devour the alarm-caller. (Sherman 1977). In the selfish gene model, this action is rational to the extent that the increased risk to the alarm caller is offset by the increased survival prospects to the other squirrels that are saved. Thus, selfish gene theorists have been able to provide a ready explanation for altruistic behavior among family "groups" that fits within their traditional model. Similarly, through the concept of "reciprocal altruism," it can be shown that repeated interactions can give rise to patterns of cooperation among individuals that induce them to forego the short-term advantages of "cheating" in order to

retain the larger benefits of maintaining a cooperative relationship. (Trivers 1971). Interest in oneself and another become identical—by bestowing a benefit on your trading partner you benefit yourself. Hence, this is consistent with self-interest and selfish gene theory.

But selfish gene theorists have been reluctant to recognize any sort group selection mechanism beyond that of the genetically-related kin group or where reciprocal relations can be maintained, such as at the level of cultures or societies. Their criticisms of biological group selection theory have mirrored those who have criticized Hayek’s group selection model. In particular, Dawkins and others have argued that altruistic behavior toward unrelated recipients will be plagued by free-rider problems. As Dawkins phrases the problem confronted by biological group selectionists:

Even in the group of altruists, there will almost certainly be a dissenting minority who refuse to make any sacrifice. If there is just one selfish rebel, prepared to exploit the altruism of the rest, then he, by definition, is more likely than they are to survive and have children. Each of these children will tend to inherit his selfish traits. After several generations of this natural selection, the “altruistic group” will be over-run by selfish individuals, and will be indistinguishable from the selfish group. Even if we grant the improbable chance existence initially of pure altruistic groups without any rebels, it is very difficult to see what is to stop selfish individuals migrating in from neighbouring selfish groups, and, by inter-marriage, contaminating the purity of the altruistic groups. (Dawkins 1989:7–8).

Taken to infinite time the logic seems undeniable—that selfish genes will inevitably prey on altruistic genes, thereby rendering the altruistic tendencies unfit for survival and replication. Contrary to what our mothers have instructed us, it appears that for our genes it is undeniably better to receive than to give. Selfish genes can free ride on altruistic tendencies to drive those tendencies out of the population.

Viktor Vanberg has observed that Hayek’s model of group selection appears to be plagued by the same difficulty. Like the reciprocal altruism model, it is not difficult to provide a self-interest explanation for behaviors that benefit the individual. (Vanberg 1986:87). The difficulty again arises in explaining behaviors that apparently are advantageous to the group in which they are practiced, but appear to be disadvantageous to the individual practicing them. These rules are the core of Hayek’s group selection theory—societies that can create and maintain these “group benefiting” rules will tend to prosper over those that do not. But these group benefiting rules would seem to be susceptible to the same free riding tendencies that undermine group selection models in the biological context. As Vanberg posits Hayek’s dilemma:

The same basic argument, however, that has cast a doubt upon the notion of group selection in biology, seems equally to undermine the notion of cultural group selection. Since, after all, it is the individuals who are to adopt and to practice the behavioral regularities which are supposed to be selected, the same type of paradox arises: though individuals who live in groups in which “appropriate” rules are practiced are better off compared to individuals that live in groups with “less appropriate” rules, within the

groups those bearing the costs of socially beneficial but self-sacrificing behavior would be relatively *worse off* than those who *free ride*, who enjoy the group-advantage without sharing the costs of its production. Hence, despite the between-group advantage from practicing appropriate” rules, there would be a within-group disadvantage for those who actually practice them compared to those who free ride. (Vanberg 1986:87).

Prevailing opinion, therefore, seems to be that group selection is simply not a viable analytical paradigm, regardless of the context.

Is Group Selection Plausible?

As the above discussion reveals, group selection theories have generally been discussed at very high levels of generality. Thus, for instance, group selection in biology has generally dealt with the plausibility of group selection through infinite time and given a stable environment. Similarly, cultural group selection has focused on the highest level of abstraction of cultures and civilizations, looking for the spread and extinction of cultures over spans of hundreds or thousands of years.

This focus on only the largest-scale and most difficult phenomena is unfortunate. The scale and duration of these phenomena make them very difficult to actually test or analyze, thus making it difficult to envision how these models apply in practice. Moreover, and it has distracted us from the recognition that in one form or another group selection is ubiquitous. To some extent much of the debate between “group selectionists” and “individual selectionists” really boils down into a matter of semantics. Once this is recognized, it will be seen that group selection theories cannot be dismissed as *prima facie* implausible, but that it is really a matter of examining the feasibility of a group selection model within the context of a particular biological environment or a particular cultural and institutional environment.

Two examples will suffice to illustrate the intuitive plausibility of group selection theories. Both examples are useful in that they really illustrate two processes that are conventionally classified as individual evolutionary models, but can easily (and perhaps more accurately) be thought of as group selection models. They also both illustrate the characteristics that are necessary for Sober and Wilson’s model of group selection to work. The first, provided by Wilson and Sober, is a biological model of group selection that deals with the combination of genes into individual “survival machines.” The second, is a non-biological model of group selection that builds on Armen Alchian’s seminal article on the evolution of efficient firms in a competitive market.

As discussed above, selfish gene theorists have posited that natural selection technically operates at the level of the gene, not at the level of the individual. Many genes, however, have combined to work together to form “survival machines” that are individual creatures, such as plants and animals. As Sober and Wilson note, this logical move from individual gene to multiple-gened “survival machines” obscures a crucial point. These “individual” survival machines are really nothing more than *groups* of many individual genes that are now working together. (Sober and Wilson 1998:87–92). Selection at the level of the *individual* human being, therefore, is really just another way of describing selection among various *groups* of genes. Groups of genes that work better together and have certain beneficial

attributes will tend to perform better in this competition than groups of genes that lack these attributes. For example, a genetic predisposition to heart failure can undermine the survival chances of the entire team of genes, even if all of the other genes are even better than the norm. Many “unproductive” genes routinely “free ride” on the contributions of other genes, yet individuals don’t become extinct. (Ridley 1996:28–30). If *groups of genes* can work together as single individuals, Sober and Wilson ask, why can’t *groups of individuals* similarly work together as single groups? “If individuals can be vehicles of selection, they why can’t groups?” (Sober and Wilson 1998:88). The question would seem to be an empirical one, not an *a priori* one.

A second example reveals the way in which group selection may operate at a cultural level. Consider Armen Alchian’s famous article, “Uncertainty, Evolution, and Economic Theory.” (Alchian 1977 [1950]). Alchian expressly adopts the metaphor of biological evolution to model the competitive economic process (Alchian 1977:15), arguing, “In an economic system the realization of profits is the criterion according to which successful and surviving firms are selected.” (Alchian 1977:19). Firms that flourish will find their adaptations copied by other firms in a process similar to cultural transmission. (Alchian 1977:28). Firms that fail to create their own innovations or copy those of successful firms will become extinct by being driven from the market.

In this model of market selection of the fittest, Alchian clearly thinks of the firm as being analogous to the individual in biological selection models. But just as the biological process of individual selection can be recharacterized as selection among groups of genes, the economic process of selection among firms can be recharacterized as selection among *groups of individuals* that make-up the firm. Indeed, as Alchian himself later made clear, firms are mechanisms for carrying out *team production*. (Alchian and Demsetz 1972). The firm with the best survival prospects, therefore, is the one that maximize the team’s joint product while minimizing the costs of this team production. But the creation of this team production structure opens the door for shirkers who seek to free ride on the efforts of the other members of the team. The hierarchical structure of a firm may be understood as a mechanism for minimizing these shirking costs so as to prevent free riding.

Thus, Alchian’s model of selection among individual firms may be better understood as a model of selection among groups of individuals working together in a team production process. Whether we call this “individual selection” among firms or “group selection” among teams is purely semantic. Moreover, this team production process inevitably gives rise to free rider problems that would not exist without team production. But obviously the existence of possibilities for free riding does not make firms impossible in some *a priori* sense. Rather, the problem becomes one attempting to *minimize* these agency and shirking costs while at the same time maximizing the joint product of the team.

Sober and Wilson recount fascinating research conducted on the egg-laying habits of chickens that sheds light on the group selection attributes of firms. (Sober and Wilson 1998:122). The basic problem confronted by egg farmers is to maximize the egg output of his chickens. Traditionally egg farmers sought to find each of the hens that *individually* laid the most eggs and put them all together in one henhouse. But there are two ways that a hen can become the most productive egg-layer in her flock. First, she may simply be the best egg-laying machine. Or, she may be the most productive because she is the *nastiest*

hen in the flock and were able to *suppress* the production of the other hens through pecking, bullying, and threatening them. When selecting for the most productive hen in the flock it is difficult to determine whether she is the most productive because she could *increase* her production above the norm, or because she could bully the other hens into *decreasing* their production.

The solution appears to be select for *teams* of egg-laying chickens, rather than simply choosing the best *individual* egg-layers. Groups of hens (those housed in the same cages) were scored for egg production, and hens from the most productive groups were used as breeders for the next generation of chicken groups. The response to this group selection was dramatic—annual egg production increased 160 percent in only 6 generations. According to researcher W. M. Muir, efforts to increase egg production by selecting at the individual level are virtually never as effective. Moreover, the increased egg production was matched by a noticeable drop in aggression among the chickens selected through the group selection process and chicken mortality rates were much lower.

And indeed, we all recognize that a large component of a firm's success depends on how well the individual members of the team work together. We understand, for instance, that the most successful football team is not just the one with the best athletes. We routinely hear successful teams speak of having a "chemistry" that makes the "whole" greater than the sum of its component players; of course, the opposite is also quite common. "Altruistic" baseball players voluntarily act for the good of the team by sacrificing their batting averages to move a runner from second to third base without having to be specifically goaded by the manager. Love and caring in the family setting may reduce the agency costs associated with household production.⁴ Like the aggressive individual chickens, "backstabbing" middle managers in corporations, by contrast, may have reached their positions by denigrating others, rather than truly outperforming them. In short, it would seem that the primary value of altruism is to reduce the monitoring and agency costs inherent in team production, thereby increasing the total surplus available.

It is obvious on a day-to-day level that group selection at the level of the football team or firm is quite common. The question, then, is not whether group selection provides a workable model of selection. Quite clearly it does. The remaining questions are empirical: namely, what are the *conditions* under which group selection will play a role in evolution, both biological and cultural?

Altruism and Group Selection

As the preceding discussion suggests, the primary benefit of altruism is to reduce the monitoring costs associated with team action by inducing individuals to act on behalf of the group as a whole, even when it would be in the individual's incentive to free ride on the contributions of others. At the extreme, of course, each individual has a personal incentive to free ride, leading to a breakdown of altruism, unless there is also a direct personal reward from acting in the desired manner. Interestingly, both Dawkins and Vanberg see group selection as untenable in light of this end-point incentive to free ride.

This tension between the group benefits of altruism and the individual benefits of selfishness gives rise to the central tension presented by Sober and Wilson. *Among* groups,

the most altruistic group will hold a competitive advantage and will, *ceteris paribus*, prosper relative to other groups. *Within* groups, however, the most selfish *individuals* who can free ride on the group’s altruism will hold a comparative advantage and will, again *ceteris paribus*, prosper relative to other *individuals* within the group. These two forces will push against each other simultaneously in a multilevel competitive process. (Sober and Wilson 1998:73–77). The net result of this competition, according to Sober and Wilson, is that some combination of altruistic and selfish traits will survive in a population. There would seem to be no *a priori* reason why selfish traits should inevitably drive altruistic traits out of the population.

A viable model of both biological and cultural group selection must have three attributes. First, it must promise sufficient *benefits* to the group that the members of the group will benefit from adopting the genetic trait or cultural rule or practice. Second, the trait or practice must have some means of spreading to new populations. Third, and perhaps most importantly, the group must be able to deal with free riders. The existence of an altruistic trait or practice inevitably gives rise to the possibility of free riding on those altruistic impulses. Thus, it is impossible to completely eradicate free riding behavior. But, it may be possible to reduce free riding to the point where the overall benefits to the group are sufficiently large such that the benefits of retaining the trait or practice are large enough to offset the costs imposed by free riders. Consider each of these elements in turn.

First, the trait or practice must generate benefits to the group that adopts them. As suggested above, the primary functional benefit of altruism appears to be to reduce the costs associated with living and working together. This would seem to apply to team production within a firm, to engage in market transactions, or to more general cultural norms that permit neighbors to live together peacefully. The payoff from adopting altruistic genetic traits or cultural practices is that a group that has the trait or practice will tend to prosper relative to those that do not. They will tend to increase in population and wealth more rapidly than groups that lack this innovation. (Sober and Wilson 1998:73–77). In a similar vein, Hayek observes that groups that adopt social practices such as several property and free contract will become wealthier and be able to maintain larger populations at higher standards of living than those that adopt inferior political and legal institutions. (Hayek 1988:23).

For group selection to be viable, there must also be a mechanism for between-group competition to occur, i.e., for groups with more superior traits or practices to displace others. Hayek was never very clear about the mechanism by which the struggle between groups occurred. More important were the end results of this process—namely that groups that adopted free markets and the cultural beliefs that underpin them would increase their populations relative to other groups. Increased population, in turn, enabled the growth of a more expansive division of labor within society leading to increased wealth. Societies receptive to capitalism, therefore, would be both wealthier and more populous than others. (Hayek 1988:120–22). For Hayek, it was largely irrelevant whether the struggle between groups was conducted through violence or peaceful means (such as imitation and migration) because wealthier and more populous capitalist societies held the edge either way.⁵ (Hayek 1988:121). Thus, population growth was the key to success in inter-group competition, and the adoption of capitalism and its values was the key to population growth. (Hayek 1988:23). He suggests that in the realm of cultural competition, superior cultures can spread

rapidly through voluntary adoption by new groups, and that improved communication technology has tended to increase the speed and intensity of this competition.⁶ Indeed, Hayek sees the speed at which new cultures can and have emerged and spread as evidence that cultural evolution is the primary force in human social evolution, as biological transmission is a much slower process. (Hayek 1988:16).

Sober and Wilson really do not add very much to our understanding of how groups come to displace one another. They discuss one example in depth, a struggle between the Dinka and the Nuer tribes, to illustrate how group competition might take place. (Sober and Wilson 1998:186–91). But they recognize a paucity of such “smoking gun” examples of between-group competition in action. (Sober and Wilson 1998:191). The difficulty is in recognizing that an evolutionary process is actually occurring such that it can be documented. Indeed, actual documentary evidence of cases of individual selection in action is actually fairly rare. Research on industrial melanism in moths and Darwin’s finches that documented the process of evolution are extremely recent additions to the scientific literature, and debate continues even about some of these cases. Sober and Wilson argue that despite a paucity of examples documenting the process of group selection, for the time being we will have to be content with studying the products of natural selection and attempting to infer the process that spawned it.

But it is not clear that Sober and Wilson’s optimism on this point is fully warranted. The process by which selection can take place on the individual level seems quite simple and subject to straightforward testing. Dramatic environmental changes over a short time give rise to predictable changes in biological makeup, such as the classic examples of changes in the beaks of Darwin’s finches (making food more readily available to some finches) or coloration in moths (affecting susceptibility to predators). It is not clear whether group selection can provide the same sort of explanations for between-group selection. Clearly further research on this point will be necessary before group selection can stand as a fully equal partner in the evolutionary story.

Third, the group must be able to prevent free riders from preying on the group’s altruism. The benefit of altruism is that it creates a social surplus that would otherwise be unavailable without the altruistic practices. The existence of this social surplus presents an opportunity for others to free ride on this altruism. These free riders are in the nature of parasites, living off the social surplus created by others. In economic terms, the existence of this social surplus gives rise to a rent-seeking opportunity to divert some of this surplus to the individual without contributing to it. This parallel to rent-seeking is a point to which I will return momentarily.

For now, however, it should be recognized that the ability to control free riding is the fundamental hurdle to a group selection theory. In the firm, free riding is controlled by establishing a supervisor who has both the incentive and authority to police this free riding behavior. Vanberg’s skepticism about the viability of group selection as to larger groups seems to be rooted in the intuition that there is no effective mechanism for controlling free riding at such larger levels.

Sober and Wilson argue that the primary function of social norms is to police individual free riding behavior. The purpose of group norms is to enforce a uniformity of behavior, thereby forcing those who would rather act selfishly (pursue “within-group” selective

advantage) to act in compliance with the overall group norm (the “between-group” favored trait or practice). (Sober and Wilson 1998:150–51). The existence of a set of social norms establishes a scale of rewards and punishments that can compel cooperation on the larger scale of unrelated individuals. Thus, as Boyd and Richerson have phrased the relationship between norms and genes, “Punishment Allows the Evolution of Cooperation (or Anything Else) in Sizable Groups.” (Boyd and Richerson 1992). In short, a society can reduce free riding behavior by establishing a system (either spontaneously or by design) of social norms and rules and a willingness to punish those who attempt to deviate them in pursuit of personal advantage.

But enforcing the norms are potentially subject to the same sort of free-rider problem that the norms were designed to solve in the first place. To the extent that it costs an individual to punish someone else’s transgression, then each individual will have an incentive to free ride on the enforcement efforts of others, the so-called “second order” public goods problem. To be most effective, therefore, these norms must be enforceable at relatively low-cost. (Sober and Wilson 1998:144). It must be easy to recognize deviations from the norms and to punish those who fail to abide by them. But it is quite common that a group could inflict severe punishment on a transgressor at very small cost to those enforcing the punishment. Indeed, costs could be reduced even further by delegating enforcement authority to a church or to a legal system to carry out enforcement of these norms. As a result, this problem may not be intractable.

The ability and desire to detect and punish defectors appears to have strong biological roots. As Robert Frank and others have observed, human beings have a remarkable ability to identify cheaters. (Frank 1988). Nor is this a distinctly human trait, as even creatures as simple-minded as guppies monitor one another’s behavior for signs of cooperation and defection. This innate ability to detect cheaters is reinforced by a similar willingness to punish those who defect from social norms. Worker honey bees, for instance, could improve their individual “within group” selective advantage by laying unfertilized eggs that develop into males, rather than allowing the queen to dilute their genetic progeny by fertilizing these eggs. Nonetheless, it appears that worker bees lay unfertilized eggs only rarely, “in part because the egg-layers are attacked by other workers and their eggs are eaten.” (Sober and Wilson 1998:148). This willingness to punish defectors harshly maintains the structure of cooperation within the hive.

The existence of a collective ability to punish free riders seems to provide some answer to Vanberg’s concern that free riders and parasites would undermine the attempt to establish norms that are effective at the group level. Punishing potential defectors makes it more beneficial for them to forego their parasitical behavior than the benefits of expropriating some of the social surplus. Thus, Sober and Wilson suggest that cultural norms can coerce individuals into the pursuit of goals that further the group’s between-group competitive advantage, rather than the individual’s within-group competitive advantage.

Similarities Between Biological and Cultural Group Selection

And thus through the evolution of norms to punish those who defect from cooperative norms, biological and cultural group selection finally come together. Cultural norms can be

understood as forming part of the environment conditioning human behavior. Individuals may have certain biological and psychological predispositions to act in certain manners. Cultural norms and practices may reinforce altruistic and cooperative predispositions, or alternatively they may reinforce uncooperative attitudes or even reward antisocial and free-riding behavior. (Zywicki 1999). Groups that adopt effective cultural norms will tend to prosper relative to those that reward free riding and defection. As Sober and Wilson observe, “With a variety of groups deploying different social norms, group selection is free to sift among a vast number of alternative primary behaviors, each of which is internally stable within the group in which it is normatively sanctioned.” (Sober and Wilson 1998:152). The *combination* of biological and cultural traits are both selected at the group level. (Sober and Wilson 1998:144).

One implication of this dual evolution of biological traits and cultural rules is that cultural and biological evolution are interrelated. As Sober and Wilson observe, to the extent that cultural norms evolve so as to reinforce biological predilections, those norms become part of the individual’s evolutionary environment. (Sober and Wilson 1998:115). As they write, “The fact that a behavior is transmitted culturally should not be taken to mean that it is nonheritable. Cultural differences between human groups are often stable over long periods of time and are faithfully transmitted to descendant groups. They are heritable in the sense that offspring units resemble parent units, which is all that matters as far as the process of natural selection is concerned.” (Sober and Wilson 1998:114). Hayek similarly observes, “Even some structural changes in the human body have occurred because they helped man to take fuller advantage of opportunities provided by cultural developments.”⁷ (Hayek 1988:17). Moreover, there is an irreducible biological component to the process of cultural selection, as the evolution of a cognitive capacity for absorbing and transmitting culture is a necessary precondition for cultural evolution to occur. (Hayek 1988:25). Evidence from chimpanzee societies also suggests that more harmonious societies also spur higher levels of cultural development (such as tool use).⁸ (Vogel 1999:2073). Internal peacefulness also makes possible population growth and division of labor, each being necessary for development of a social surplus and the development of civilization. In Hayek’s phrase, “We have become civilised by the increase of our numbers just as civilisation made that increase possible: we can be few and savage, or many and civilised.” (Hayek 1988:133). To the extent that more altruistic groups were more peaceful and cooperative, they may have also created the conditions for more advanced cultural norms as well.

Implications of Group Selection Models

Assuming that group selection is a viable model of biological and cultural evolution, what are the implications for the study of economics and society? Hayek concluded that the result of inter-group cultural competition resulted in the preeminence of individual liberty, constitutional government, and free markets, “especially those dealing with several property, honesty, contract exchange, trade, competition, gain, and privacy.” (Hayek 1988:12). Only through the adoption of institutions of several property and capitalism and the norms that sustain them can societies coordinate dispersed knowledge throughout a society and maximize productive capacity. Societies that adopt capitalist institutions will prosper and

be able to sustain larger populations than those that fail to do so. Consequently, over time capitalist societies will come to displace other types of societies through an unspecified process of group selection.

Writing in response to Viktor Vanberg’s previously-cited article, Geoffrey Hodgson has challenged Hayek’s conclusions on these points. (Hodgson 1991). Anticipating several of the arguments made by Sober and Wilson, Hodgson challenges Vanberg’s conclusion that group selection provides an implausible model of biological and cultural evolution. Nonetheless, Hodgson disagrees with Hayek’s conclusion that the adoption of a group selection model leads to an endorsement of free markets and limited government.

Hodgson argues that Hayek is correct to recognize that selection operates on a plurality of different groups or agencies, but myopically limits the range of his inquiry to selection operating within “a given (market) structure. Thus, [Hayek] ignores the possibility that selection may also be working at the level of structure and substructure, creating a diversity not simply of groups and agencies but also of types of economic system or subsystem, as well as a diversity of market forms.” (Hodgson 1991:79). Hodgson adds that “Hayek should be criticized, not for embracing group selection and eschewing a consistent individualism, but for failing to incorporate additional processes of selection above the group level, involving the selection of different types of institution, including both market and nonmarket forms. To work at such higher levels, evolutionary selection must involve different types of ownership structure and resource allocation mechanisms, all coexisting in a mixed economy.” (Hodgson 1991:79). Finally, Hodgson comments that selection at the super-group level “would involved a plurality of types of economic structure and system, in addition to the mere plurality of groups and individuals in a competitive market system. This means some kind of mixed economy, of whatever type or hue We may make the related observation that many of the developments in modern biology no longer seem to sustain a noninterventionist and free market philosophy, contrary to the claims of many social theorists in the past.” (Hodgson 1991:80).

On the claim that the insights of evolutionary biology make a case for a mixed economy, Hodgson is incorrect. Recall that the fundamental difficulty confronting advocates of group selection theories is the need to protect against parasites and free riders. Far from policing free riders, the core element of a mixed economy and welfare state is the fundamental empowerment of free riders to tap into the general surplus created by cooperative activity. Thus, Hayek is correct in stressing a system of several property and limited government, as such systems are designed to maximize social surplus by providing individuals with incentives to use scarce resources in the most efficient manner.

Hodgson, by contrast, has it exactly *backward*: by empowering the recipients of government largess, he is giving free riders the power to determine the allocation of wealth within society and undermining the process of wealth creation. Moreover, moving the process of wealth allocation from markets to politics has the effect of replacing the market process of cooperation and reciprocity with the zero-sum, conflict-riven game of politics. (Zywicki (in press)). Politics is fundamentally a grab game, where each individual and group seeks to transfer as much unearned wealth as possible to themselves. It has been long-understood that the failure to restrain rent-seeking activity through constitutional limits on government can result in a destruction of the social surplus created by productive activity. (Olson 1982,

Boettke 1998). One only need to observe the stunning combination of unlimited greed and political ruthlessness exhibited by the AARP and able-bodied retirees in the United States to recognize the essential nature of the political process.

Hodgson's error seems to be that he equates altruism with large-scale state activity, a claim that rests on a fundamentally erroneous understanding of the nature of the State. The State is founded in conquest, bloodshed, and slavery. (Carneiro 1977, Benson 1999). As Franz Oppenheimer observed, "What, then, is the State as a sociological concept? The State, completely in its genesis, essentially and almost completely during the first stages of its existence, is a social institution, forced by a victorious group of men on a defeated group, with the sole purpose of regulating the dominion of the victorious group over the vanquished, and securing itself against revolt from within and attacks from abroad. Teleologically, this dominion had no other purpose than the economic exploitation of the vanquished by the victors." (Oppenheimer 1975 [1914]). Restated in biological terms, the purpose of the state can be understood as a formalized mechanism for higher-ranking "alpha" members of society to expropriate wealth and power from lower-ranking members of society and transfer them to themselves.⁹ (Zywicki (in press)). In this view, constitutional limitations on government are a mechanism for lower-ranking members of society to band together to resist this expropriation. (Zywicki (in press), Grady and McGuire (in press)). In unleashing the power of the state and those who act for it, therefore, Hodgson is returning power to the dominant actors that constitutionalism was designed to tame.

Given the clear potential for free riding and opportunism associated with the welfare state and a mixed economy, it is doubtful that such a regime would be successful in a between-group competitive process. (Rubin 1999). Successful societies evolve norms that tend to restrain the possibilities for free riding, rather than encouraging them. As Sober and Wilson observe, "The freeloading problem is the classic argument against altruism in both human and nonhuman societies. Many of the social norms promoting generosity and cooperation that we have discussed seem highly vulnerable to freeloading. *On closer examination, however, the simultaneous emphasis on group welfare and personal autonomy provides safeguards against unrestricted requests for aid and material goods.*" (Sober and Wilson 1998:181). Few, if any, species or cultures impose unqualified obligations to provide or receive aid because of the ease with which such rules can be exploited by free riders and parasites. Instead, most such obligations arise from obligations of reciprocity. (de Waal 1996).

Reciprocity-based altruism is a more plausible model of altruism than the indiscriminate and easily-exploited brand of altruism suggested by the welfare state and mixed economy. Thus, it should not be surprising that most forms of cooperative and altruistic behavior take the form of reciprocity-based relationships, rather than indiscriminate altruism. Vampire bats, for instance, are confronted with the problem that they must feed on blood at least once every 48–60 hours or die. (Wilkinson 1984). Quite often, however, an individual vampire bat will be unlucky and fail to find prey during this time period. Lacking little bat refrigerators to store blood for unlucky days, vampire bats have hit upon a rather ingenious scheme: a bat that is successful in hunting will regurgitate some of his surplus blood to feed a fellow bat. But such sharing is not indiscriminate—bats are more likely to share with bats that have shared with them in the past. "A bat that has donated blood in the past will receive blood

from the previous donee; a bat that has refused blood will be refused blood in turn Reciprocity rules the roost.” (Ridley 1996:63). Perhaps most interestingly, the neocortex region of vampire bat brains are far larger than for any other bat species. Biologists speculate that vampire bats have evolved these unusually large brains precisely for the purpose of keeping track of reciprocal obligations among members of the vampire bat society. (Ridley 1996:69). And, indeed, vampire bats have demonstrated a remarkable ability to identify and discriminate in their blood-sharing activities even under relatively difficult scientific conditions. (Dawkins 1989:232–33).

As for humans, we clearly act in a more altruistic and trusting way towards close friends than we would toward total strangers who we will never meet again, and we reciprocate more with those who have reciprocated with us in the past. (Sober and Wilson 1998:129). And, of course, humans have evolved extremely large brains relative to our body size, at least in part to keep track of mutual obligations of reciprocity and to detect those who would cheat on such obligations. Moreover, differential rewards are routinely used in animal and human societies to provide appropriate incentives for skilled hunters to use their skills for the benefit of the community as a whole. Skilled chimpanzee hunters receive a larger portion of meat from a prey that is killed, and retains primary responsibility for distributing the spoils. (de Waal 1996:140–42). By contrast, male chimpanzees that attempt to free ride by trying to participate in the eating without having participated in the hunt “tend to receive little or nothing.” (de Waal 1996:141). “According to the primatologists, the linkage for male hunters between participation and payoff guarantees a high degree of collaboration in the Tai [chimpanzee] community.” (de Waal 1996:141). Human societies likewise give predominant property rights in meat to the hunter who killed the prey. (de Waal 1996:138).

This suggests that Hodgson is wrong to believe that humans would seek to express their altruistic impulses impersonal, large-scale organizations such as the state. Such indiscriminate charity would soon fall prey to deceptive politicians and greedy special interest groups, as the imminent bankruptcy of welfare states around the world attests. Instead, we would expect to see our instincts for charity and compassion expressed through reciprocity-based institutions, such as churches and local charities. Rather than indiscriminate charity, such organizations temper the grant of charity with reciprocal obligations on the part of the recipient. Donees are also likely to have ongoing reciprocal relationships with such organizations that provide the basis for reciprocity-based notions of charity. Of course, concepts of private property, constitutionally-limited government, reciprocity, and local and voluntary provision of public welfare benefits are far closer to Hayek’s vision of society and the proper role of the state than Hodgson’s.

Conclusion

It would be premature to conclude that Sober and Wilson have conclusively established the case for group selection as a major force in the process of biological evolution. Such a conclusion will be reached (if at all), only after much more study and empirical testing. Nonetheless, they have constructed a plausible model of how group selection might operate in practice and the conditions under which it might be important. Given the clear parallels to Hayek’s model of cultural evolution, perhaps it is time to revisit one of his more controversial ideas in a new light.

Notes

1. As Whitman has observed, “Nearly all of the political and economic doctrines of Friedrich Hayek have drawn heated criticism from one quarter or another, but few have attracted so much critique and rebuke, from authors of diverse persuasions, as his theory of cultural evolution.” (Whitman 1998:45).
2. Hayek, by contrast, believed that the validity of cultural group selection was independent of the validity of biological group selection: “[C]ultural evolution operates largely through group selection; whether groups selection also operates in biological evolution remains an open question—one on which my argument does not depend.” (Hayek 1988:25). While Hayek is correct that the two are logically distinct, they are *analogically* very similar and both supporters and critics of Hayek’s views on cultural group selection have drawn heavily on biological group selection models in discussing his views.
3. As Jeremy Shearmur and others have noted, there is some debate with respect to Hayek’s full authorship of *The Fatal Conceit* and especially the views on group selection articulated therein. (Shearmur 1996). I will assume here that *The Fatal Conceit* was a substantially accurate expression of Hayek’s views at the time, even if some of the exact language and analysis was amended in the editing process. *The Fatal Conceit* seems to be a logical culmination of the trend in Hayek’s thought of which *Law, Legislation, and Liberty* is indicative. Indeed, Hayek’s lecture given at the Hoover Institution in 1983, and printed as “The Origins and Effects of Our Morals: A Problem for Science” in *The Essence of Hayek* (Hayek 1984) is consistent with the ideas expressed in *The Fatal Conceit* and clearly anticipates and refers to that larger work.
4. Household production by multi-member households raises problems generally associated with team production, including the potential for shirking by some members of the family “team.” Love and caring makes the utility functions of the members of the family team more interdependent, thereby reducing the incentives of team members to shirk. Thus, as suggested in the text, altruism in the form of family love and caring helps to reduce the various agency costs associated with household production. (McKenzie and Tullock 1975:106, Becker 1976:235–236).
5. Because wealth in capitalist societies is generated primarily through voluntary exchange it may also be more likely than non-capitalist societies to generate the relations of trust and reciprocity among individuals that will inculcate habits of cooperation that provide a comparative advantage in between-group competition. (Zywicki 1999).
6. Indeed, the fall of the Soviet Union is often explained in part by the awareness of Soviet citizens of the material and spiritual benefits of capitalism relative to communism—a classic example of selection among cultural groups in action.
7. For instance, some have argued that in societies where male children have been unusually highly-prized for a very long time as the result of cultural norms, the standard for female beauty may differ from the general pattern of female beauty. In particular, it has been proposed that in such societies women with smaller hips (i.e., less “feminine” measurements) are coveted, as such measurements may indicate that the woman may have higher than average testosterone levels, making male offspring more likely.
8. Chimpanzee societies exhibit a degree of cultural development and variation exceeded only by humans and further evidence an ability to transmit cultural lessons through teaching and imitation. (De Waal 1999, Whiten et al. 1999, Vogel 1999).
9. As Frans de Waal’s classic book *Chimpanzee Politics* suggests, human politicians are not alone in using the power bestowed by politics to enrich themselves. (de Waal 1982). As de Waal also makes clear, Bill Clinton is not the first political leader to use political power as a means to increase his opportunities for sexual success.

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