

HAYEK AND MODERN EVOLUTIONARY THEORY

Paul H. Rubin and Evelyn Gick

INTRODUCTION

Hayek was a firm believer in the effect of evolution on human behavior. This was a real advance since he wrote in a time when most social scientists believed in the “blank slate” (Pinker, 2002) and denied the influence of biology on human actions. Moreover, Hayek got the basic outline of the problem right. Most of human existence has been spent in small groups (25–250 members) and many of our tastes and preferences have evolved in that setting. These tastes and preferences are not always adapted for modern mass societies with market economies and extensive division of labor and exchange. However, evolutionary science and particularly its applications to human beings have advanced since Hayek wrote, and some of the details of his analysis are no longer consistent with current theories.

In this paper we consider some areas where Hayek wrote and compare his writing with more modern theories. We consider specifically: the Original Society; the Evolution of Society; the “New Social Order”; Individual and Group Selection; Religion; and Political Decisions. In all cases we consider first Hayek’s views, and then modern views on the same topic.

THE ORIGINAL SOCIETY

Hayek

Hayek's analysis of the evolution of human societies starts with a historic view of mental and societal developments. For a better understanding of social phenomena as described in Hayek's works we summarize his cognitive theory.¹ This theory shows the relationship between stimulus and response on an individual plane. Every perceived stimulus or bunch of stimuli must fit into "categories." These categories work as a filter in that only categorized or classified stimuli may lead to an action. After stimuli have passed the process of classification, the human mind is able to perceive them because they belong to a certain set of categories the brain processes. Categories, the filters themselves, are formed by "dispositions."² Dispositions and categories share the same features: they are genetically inherited but also the result of individual and societal experience. Dispositions are "general rules" or "patterns of action" which are usually superimposed by other dispositions that refer to the current situation of the individual and evoke the individual's response. In the very beginning of humankind, as human brains developed a certain structure and also certain dispositions of behavior, the instincts, developed. Humans during this stage developed similar dispositions since they shared the same perception of the environment and its aims, risks, and threats. Dispositions are closely connected to knowledge: because individuals know their environment, they know what they perceive (stimuli pass certain categories) and they know how to react. Thus, dispositions store knowledge. It is necessary to stress that knowledge is not only knowledge of a specific individual but also knowledge of the society itself. We observe this kind of knowledge when looking at societal traditions such as how group members usually act. Dispositions are therefore not only genetically inherited but also the result of individual and societal experiences which the individual is part of.

At the time when instincts became genetically fixed, the predominant pattern of society was a "face-to-face society." Small groups with 10–15 members, usually groups of relatives, such as gatherers and hunters, emerged together with strong links between one another. Instincts played the decisive role in ensuring the best available adaptation to the prevailing environment.³ Insofar as group members had similar knowledge about their environment, they shared similar needs and expectations about the behavior of their group members.⁴ The dispositions to act "instinctively" were therefore the best response to the stimuli that reached the individual. Instincts, the "moral rules" of small groups or the "natural morality"⁵ also helped control and ensure cooperation among group members. This form of cooperation had been established by trust; the behavior among the members was

dominated by altruism,⁶ solidarity, sympathy, and group decisions. The regularity of their actions which were grounded on similar perceptions brought about an order of the society: the order of the small group.

Modern Theories

Much of Hayek's argument is congruent with modern theories, but much is not. In particular, while individuals were more closely genetically related than is true of societies now, nonetheless, there was more conflict in these societies than Hayek seems willing to admit. There is both theoretical and empirical evidence of conflict in early societies. Empirically, [Keeley \(1996\)](#) and [Knauff \(1991\)](#) have documented high rates of homicide among contemporary societies that are analogous to these societies. Moreover, many students of human evolution believe that the only selective force with sufficient power to generate our level of intelligence was competition with other humans (e.g. [Byrne & Whiten, 1988](#); [Humphrey, 1976](#); [Rubin, 2002](#); [Whiten & Byrne, 1997](#)). This is because such competition can have positive feedback, and so can generate any level of intelligence that the organism can support.

Hayek discusses the "herald" or leader. The best evidence is that in early societies, while there is a leader, he (and it is always a man) is often severely restricted in power. [Boehm \(1999\)](#) discusses a "reverse dominance hierarchy," meaning that subordinates cooperate to limit the power of dominants. If dominants try to amass too much power (those whom Boehm calls "upstarts") then subordinates use tools ranging from ridicule to exit to homicide to constrain him. Decisions are generally made through consensus, with all adult males participating in the process. Of course, some dominants will sometimes be successful in obtaining power. However, it is generally thought that this is an exceptional situation.

Hayek is probably correct in discussing the evolved nature of moral rules and morality. There is evidence that even chimpanzees, our closest relatives, have some moral rules ([De Waal, 1996](#)) and presumably our common ancestor also had such rules. They are crudely associated with the common law rules of property, contract, and crime. For example, in experiments, a chimpanzee will reward another chimpanzee who helped him acquire some fruit. Monkeys such as baboons do not behave in this way. Chimps also recognize property rights, and presumably early humans did as well. Of course there was little property, but, for example, in chimps an animal that has killed some game has the right to the game, and generally distributes it in various ways, including giving some to those who helped in the hunt.

A point that Hayek missed is the role of competition over women. Among early humans, this is an important driving force. Our ancestors were generally

mildly polygynous, based on relative size of males and females. Thus, dominant males would have more than one mate. This meant that some subordinate males had no formal access to females. This was a source of tension in early societies, and remains so in those modern societies that allow more than one wife. Unlike economic competition, which is positive sum, competition over women is essentially negative sum, and so this form of competition will not have the beneficial effects of competition over economic goods. One of the major features associated with the rise of the West has been the outlawing of polygamy.

THE EVOLUTION OF SOCIETY

Hayek

In a changing environment the old patterns of behavior, the instincts, were not the best response any more. Gradually trade started playing a crucial role. Trade developed in the very early stages of mankind (e.g. 30,000 years ago, in the Paleolithic) even before agriculture (Leakey, 1981, quoted in Hayek, 1988). Nevertheless, the greatest expansion of trade occurred around 750 to 550 BC in the Mediterranean region. This expansion would not have been possible without a certain population density, the key to specialization and division of labor. The emergence of property rights, which are linked to the division of labor, was closely connected to trade as the motor of social development. “The crucial point,” notes Hayek, “is that the prior development of several property is indispensable for the development of trading, and thereby for the formation of larger coherent and cooperating structures, and for the appearance of those signals we call prices” (1988, p. 31). He sets the beginning of property rights in the stage of human development when hand-crafted tools appeared. Separate ownership on perishable goods was only a later issue, “as the solidarity of the group weakened and individuals became responsible for more limited groups such as a family” (Hayek, 1988, p. 31).

The possibility to trade with non-members of their own group led to the “division of labor, which implies the mutual adjustment of activities of people who do not know each other . . . and thus to the division of knowledge” (Hayek, 1979, p. 158). To explain how establishment of trade changes the original society we return to Hayek’s cognitive theory and to his concept of knowledge in particular. As we have seen, members of a society will tend to act in a specific way because of the social quality of their dispositions. However, final individual actions cannot be predicted because of the individual quality of the dispositions. Dispositions are therefore responsible for what is perceived by the individual, and perception and action have

a subjective character. In the age of hunter-gatherers the individual dispositions are very similar.

We can link this approach to the concept of knowledge. The key element of Hayek's theory is that human knowledge is limited. The reason that individuals have only a limited knowledge about their environment and are able to act only by referring to a small part of it lies in the fact that the social system, the marketplace in economic systems, and the nervous system are all complex phenomena. There are so many variables or circumstances that bring about a result that one cannot take them all into account (Weimer & Palermo, 1982). But again, what holds for the dispositions of the members of a small group in early stages of human development holds also for the knowledge of these individuals: because the environment is not very complex, individual's knowledge is very similar. Nonetheless, we should take in account that dispositions and knowledge could vary from individual to individual because of the characteristics of dispositions pointed out earlier: individual experience colors individual dispositions.

It is not just the limited capacity of the brain to perceive and process knowledge which is important, but also the fact that knowledge is necessarily tied to individual perceptions and interpretations of how to act: knowledge is memorized in rules of perception and in rules of conduct. In other words, knowledge will always have a subjective quality since all information that reaches the mind depends on individual categories and individual dispositions. Knowledge is also largely dispersed in a society. Every individual will acquire only so much knowledge as he needs for his own interpretation of the world and for his own actions. In a more complex world with contacts to individuals not belonging to their own group, an individual will build up more individual experience and therefore different knowledge compared to the other group members. Knowledge, varying from person to person, leads to a different perception and to different individual cognitive frameworks.

Taking that into account, it follows that trade cannot be based on collective knowledge.⁷ It needs the establishment of conditions that permit these activities to flourish. There is a need for a new mechanism. Private property rights emerge as a substitution for common ownership. Hayek, following Hume and Smith, points out that private property is the fundamental principle of cultural evolution (Hayek, 1988, Ch. 2–3). These new phenomena are responsible for a faster growth of the group, but one of the most important consequences of this process was the separation of goals for different members. The group and its behavior changed and a new social order could arise. The gradual replacement of innate responses by new rules, perceived and learned from outside the group, accounts largely for human evolution. The instincts themselves did not lead to a more beneficial life. Their gradual suppression, together with their replacement by new rules of conduct, led to a new order.

Modern Theories

Hayek gets much of this wrong. He places more weight on economics as the driving force for social change than it can bear.⁸ Anthropologists separate human existence into two fundamental periods. The major division is between “mobile” and “sedentary” societies, also called “simple” and “complex” (Knauff, 1991) or “egalitarian” and “nonegalitarian” hunter-gatherers, or foragers (Kelly, 1995). Mobile hunter-gatherers are also called “immediate-return” hunter-gatherers, meaning that “no surplus is created and resources, especially food, are consumed on a daily basis” (Kelly, 1995, p. 31). By far the longest period of our existence as humans was the time spent as mobile foragers. During this period, human groups were small, there was little social structure, little food storage, and little division of labor or specialization. The only “occupational specialization” was by age (Kelly, 1995, Table 8–1, p. 294). However, even in early societies, property rights were approximately efficient (Bailey, 1992). Such people traveled light, and did not burden themselves with belongings (Kelly, 1995, p. 296, citing Woodburn, 1980). This was also the pattern of our pre-human ancestors during the EEA, when they evolved to become *Homo sapiens*. The study of mobile hunter-gatherers is germane because this way of life is similar to the lifestyle in which we evolved, and so we are adapted to this way of living. Thus, insights into the period of nomadic hunter-gatherers would be applicable for understanding the hardwired pattern of the mind. Of course, there were many changes during the EEA. For example, there were alternating periods of glacial advance and retreat. However, the social environment seems to be more important in explaining human evolution than the physical environment, and this would have been more constant.

Complex hunter-gatherers differ in many dimensions; specifically, occupational specialization is “common.” Thus, this distinction (which Kelly attributes to changing from a mobile to a sedentary life style) is the boundary between specialized and unspecialized roles for individuals in societies. By the time of large agricultural societies and the beginning of written history, specialization and division of labor were common and significant among humans. But this came late in our existence as humans – probably too late to have left a major mark on our evolved preferences or intellects.

There are several economically relevant features of the EEA. Societies were small – about 25–150 individuals. This means that possibilities for specialization and division of labor were quite limited. Adam Smith’s admonition that “The division of labour is limited by the extent of the market” has always been true, and small societies imply highly limited possibilities for division of labor (Smith, 1776/1904, Bk 1, Ch. 3). While division of labor by gender is universal among humans (Brown, 1991) there was little in the way of more complex forms of specialization.

Many anthropologists make the same point regarding specialization among mobile hunter-gatherers. With respect to warfare, Keeley (1996, p. 46) indicates that: “[S]ocieties without specialization in the economic realm were unlikely to develop specialized warriors or units.” Conflict in ancestral societies was unorganized and was usually a small raiding party attacking an individual in the rival group (Keeley, 1996; Wrangham & Peterson, 1996). Carneiro (2000, p. 12929) indicates, “[F]ull-time craft specialists come into being only when the aggregate demand for their products has reached a certain threshold.” Maynard-Smith and Szathmari (1999, p. 148) believe that division of labor was uncommon until relatively recent times: “Populations of, at the most, a few hundred individuals, with little division of labour, except, probably, that between the sexes, have been replaced by societies of many millions, dependent on extensive division of labour.” This limited amount of specialization is consistent with the conclusion of Stiner et al. (1999, p. 193) that “Low human population densities during most of the Middle Paleolithic imply that group sizes and social networks were small, which certainly limited the numeric scope of individual interactions. Under these conditions the possibilities for evolution of complex sharing and exchange behavior as ways to counter the effects of unpredictable resource supplies would have also been quite limited.”⁹

Because societies were mobile, all possessions had to be portable and there was little capital accumulation. Our ancestors used wood, stone or bone tools and perhaps some other simple implements, but all of these had to be moveable. “They tend to use portable, utilitarian, easily acquired, replaceable artifacts . . . and avoid those which are fixed in one place, heavy, elaborately decorated, require prolonged manufacture, regular maintenance, joint work by several people, or any combination of these” (Woodburn, 1980, p. 99, quoted in Kelly, 1995, p. 296). Since there was little capital, there was little value to developing an ability to understand the productivity of capital – which may explain the intuitive appeal of various “labor theories of value” that Marxists and others have adopted.

There was very little technological advance. The pace of technological change in early societies seems amazingly slow by current standards. For example, the Acheulean hand axe tradition lasted for more than one million years in Africa, Asia and Europe. In the Upper Paleolithic, about forty thousand years ago (when *Homo sapiens* had evolved), “major technological change” is defined as taking place when a change in stone techniques transpired over “a few thousand years.” The Gravettian tradition in Europe lasted from about 27,000 to about 12,000 years ago (all data from Gowlett, 1992). This slow rate of technological change may have been due to relatively less intelligent pre-human ancestors in the early periods. More recently, it can be explained as being due to low levels of population and hence fewer individuals to create new technologies (Jones, 2001; Kremer, 1993; Simon, 1981/1996) and perhaps poorly defined property rights in innovations

(Jones, 2001). Given this low rate of technical change and innovation, there was no benefit to evolving a mental mechanism for understanding or rewarding innovation. There was little growth – so little that no individual would observe any growth over his/her lifetime (Kremer, 1993). Each person would live and die in a world of constant technology and income. Thus, there was no incentive to evolve a mechanism for understanding or planning for growth.

The crucial change occurred when population density became sufficiently large to induce humans to cease moving and settle in one location. This had numerous effects, both economic and political. Formal farming began. Population density began to increase more rapidly. Specialization became important and the amount of trade, within and between societies, increased. There was storage of goods. However, this was also the beginning of the era of kings, and of wars and conquest. Many of these early rulers engrossed very large numbers of females as wives and concubines (Betzig, 1986). This period describes most of human “history” – the time when there were written records. It began about 10,000 years ago. We are still in this period, although recently (perhaps within the last 500 years) the power of governments in the west has begun to decrease. But the driving force was population density, which led to increased trade; trade, specialization, and division of labor were results; they did not drive the process.

THE “NEW SOCIAL ORDER”

Hayek

The more complex a society became the more it had to replace innate responses with new rules, which were perceived and learned from outside the group. The instincts themselves no longer led to a beneficial life, but instead it was their gradual suppression combined with their replacement by new rules of conduct that brought about a new order. Hayek (1979, p. 164) makes the differences between the old and new patterns of behavior clear:

The conduct required for the preservation of a small band of hunters and gatherers, and that presupposed by an open society based on exchange, are very different. But while mankind had hundreds of thousands of years to acquire and genetically to embody the responses needed for the former, it was necessary for the rise of the latter that he not only learned to acquire new rules, but that some of the new rules served precisely to repress the instinctive reactions no longer appropriate to the Great Society.¹⁰

These new rules on which the evolved society is grounded form the “morality of the large group” or the “morality of the open society.” They include frugality, fairness, property rights, trade and competition. Hayek’s writing follows David Hume’s

thoughts about the morality of property and honesty, which, in an extended order, ensures cooperation. Only over time these rules have had become increasingly established inside societal tradition and had to be transmitted through the cultural process of socialization. These new rules of morality therefore shaped a part of culture and are, in contrast with the rules of morality of the small group, constantly in change.

At this point Hayek refers to the concept of altruism. He rejects the idea that altruism in connection with small groups is “morally good.” As he points out (1979, p. 167), there is no thing such as

‘natural goodness,’ because with his innate instincts man could never have build the civilization on which the numbers of present mankind depend for their lives. To be able to do so, he had to shed many sentiments that were good for the small band, and to submit to the sacrifices which the discipline of freedom demands but which he hates. The abstract society rests on learnt rules and not on pursuing perceived desirable common objects: and wanting to do good to known people will not achieve the most for the community, but only the observation of its abstract and seemingly purposeless rules. Yet this little satisfies our deeply engrained feelings, or only so long as it brings us the esteem of our fellows.

Instead of speaking about altruism in the sense of doing good to known people or, to put it differently, acting in a way to induce certain outcomes, Hayek sees altruism in the developed society as acting according to rules which enhance the extended order. It is not the result of an action that is important, but rather the adherence to abstract rules, the morality of the large group. Again, his cognitive theory can help to explain this view: Since in a world of complex phenomena it is impossible to know all the circumstances which influence the outcome of an action, only the observation of rules underlying the extended order which has already been proven to benefit this order makes an action good. “Observing these rules,” Hayek (1988, p. 81) argues, “enables us to confer benefits beyond the range of our concrete knowledge.” Hayek’s critique of socialist reasoning about “social justice” and therefore redistribution of wealth and income appears to be straightforward. Socialism seems to have a strong impact on the altruistic feelings which were predominant in the small groups. Therefore he calls socialism a form of atavism which in the long run will undermine and destroy the extended order.¹¹

Modern Theories

Hayek is correct in arguing that evolved moral principles are not always in agreement with moral principles needed to operate a market economy. However, in some instances he exaggerates the differences. But it is important to keep in

mind the purpose of an economy or a society. This is to satisfy human tastes and preferences. It is true that these tastes evolved in different situations, and if we were to design tastes for a market economy with millions of inhabitants, we would probably design different preferences. But we do not have that option. We have an evolved set of preferences, and those are the preferences we strive to satisfy. Many have made this point with respect to food preferences. We evolved in a world where fat and sugar were scarce, and our ancestors who ate as much of them as feasible were more likely to survive to be our ancestors (Burnham & Phelan, 2001). Today we might do better if we had different tastes, but we do not. The result is that modern Americans spend as much time and effort discussing and considering food as did our hunter-gatherer ancestors, but, while they discussed ways to get it, we discuss ways to avoid it.

Hayek is concerned with our taste for altruism. We did evolve such tastes; humans are much less selfish than economic theory normally supposes. But our altruistic preferences are more constrained than Hayek seems to believe. In particular, it has been argued that the competitive conditions of the evolutionary environment would have allowed only “efficient altruism” – altruism aimed at solving a prisoner’s dilemma or similar situation (Rubin, 2002, Ch. 3). Preferences such as those required for Marxism or for the Rawls system could not have evolved in this environment, and indeed, we do not have those preferences. For evidence about Marxist preferences, we need only look at the fate of the Marxist societies, which seemed to be thriving when Hayek was writing but which we have now seen to be inconsistent with human preferences.

In addition to generalized altruism towards kin, two specific forms of altruism would have been particularly important in evolutionary times. One would have been to provide medical assistance to a person who was hurt but would likely survive with such assistance. The world in which we evolved was much more dangerous than the world in which we now live, and injuries would have been much more common. Nursing someone through an injury or illness would have been an efficient behavior, in the sense that it would have served to increase the strength and survival ability on one’s band. Thus, today, we treat medical care as being different from other goods, and this creates dilemmas in a world where the amount that can be spent on such care is boundless.

Second, it is likely that people innately dislike those who accumulate wealth. But the main source may be the general nature of zero-sum thinking, rather than the specific mechanisms identified by Hayek. The popular view of business is generally negative (Rubin, 2002). Stein (1979) shows that movies generally portray business in a negative light. A more recent example is from the 1987 movie, *Wall Street*, in which a financier engaged in efficiently moving assets from lower to higher valued uses is depicted as evil. Jobling (2002) has argued that in nineteenth century novels,

characters did not become successful through business practices because audiences would have viewed success through business as reflecting harmful social behavior. If wealth in the evolutionary environment was limited and if the main way to be wealthy was to avoid one's obligation to share, then attitudes viewing the wealthy as evil could be part of our mental structure. This is consistent with some religious beliefs; consider Jesus' saying that "It is easier for a camel to pass through the eye of a needle than for a rich man to enter the kingdom of God" (*Matthew 19:24*). Ayn Rand did portray businessmen in a favorable light, but her novels, while appealing to some, have not been major popular successes.

TWO SELECTION PROCESSES: INDIVIDUAL SELECTION AND GROUP SELECTION

Hayek

Let us give an insight in the selection processes discussed by Hayek. The important contribution of Hayek, as already discussed in the historical perspective, is that the individual predisposition to perceive rules from outside the group (society or subgroups) allows for a process of individual selection as well as group selection.

The development of the society starts on an individual level. The first evolutionary process is an individual selection process that refers to the perception of rules that are slightly different from already existing ones and hence leads to the *creation* of new rules. It is seen in Hayek's cognitive framework, a process that operates on a subjective plane. The decision to act according to a certain disposition is the answer to an *individual* process of trial and error; it is a process in which the individual responds to an outside stimulus referring or not to the dispositions that reflect group behavior.

If the individual deviates from the "common" rules of action because of his awareness of a better rule or because of his increased subjective knowledge and he is shown to be more successful than when he acted in common, he will be imitated by other members of the society or his group. The more individuals follow this process of problem solving, the faster this rule becomes a part of the group's dispositions: a new rule which changes the existing social order has emerged. Vromen (1995) calls this kind of imitation "within-group-imitation." Likewise, moral rules may also be accepted directly from other groups. But there are set limits to individual deviation. The individual selection process is subject to the degree to which an individual may deviate from rules, which in turn depends largely on his reputation.¹² If the individual cannot change his behavior inside his

group, he may still migrate to a group that either already practices the new rule in question or offers more tolerance toward deviators. This process, according to Vromen (1995), is called “between-group-migration.”

A second step in the historical interpretation of cultural development is the working of a group selection mechanism. Group selection occurs in a process in which the set of new rules or, to put it differently, in which the changed order, *may* lead to more beneficial outcomes for the group as a whole, enhancing the group’s fitness, compared to the situation before the individual selection process took place.

Hence, the key criterion in the process of individual selection is individual fitness, in the case of group selection it is the fitness and thus the growth and survival of the group.¹³

Modern Theories

The issue of individual or group selection is a major theme of modern biology and sociobiology, or evolutionary psychology. While the standard view has been that group selection is impossible because of free riding, there are more recent theories that indicate that it may after all be possible (Sober & Wilson, 1998). Zywicki (2000) has written a lengthy and thoughtful paper about the relationship between Hayek and this work, and we will not address it further here.

One issue is worth addressing, however. This is the issue of cultural evolution. The major authorities on this issue are Boyd and Richerson, who have written voluminously on this issue and on the relationship between cultural and individual selection. A recent example is Richerson and Boyd (2002). A key point in their analysis is the role of multiple equilibria. There are infinite numbers of options available for many cultural artifacts. Humans are imitative animals; imitation is a useful tool and we are very good at it. Thus, if everyone around us adopts some cultural practice, most of us will adopt it as well. Then many cultural options could each be an equilibrium, and individuals will selfishly adopt the particular culture in which they live. In this sense, there is no conflict between individual and group selection. But nonetheless group selection can occur because some cultures are more “fit” than others. That is, individuals can adapt to the culture in which they live but some cultures will out compete others. Soltis, Boyd and Richerson (1995) indicate that such evolution might be quite slow, but it can still exist. Moreover, their critics believe that their estimates may be low. For example, we have recently observed that western capitalist culture is superior (in the sense of fitness) to communist culture. This sort of group selection is important in human culture and is consistent with Hayek’s notion of group selection.

RELIGION

Hayek

As we have mentioned, there are limits to individual rule-setting in the sense of individual selection processes. We find such limitations in legal settings that come with costly enforcement. Limitations may also occur on an informal level through taboos, totems, or religions. Hayek (1988, p. 136) stresses the importance of these rules because they ensure that “[c]ommon practices . . . have a chance to produce their beneficial effects on a group on a progressive scale before selection by evolution can become effective.” Religions therefore make sure that the actual societal order cannot be corroded by individual trial and error processes. The fear for punishment, by humans or by God, is a huge obstacle for many individuals. This fear turns out to be beneficial because only a relatively stable societal order can undergo the slow process of group selection. A stable social order, a result of religious beliefs, enables “beneficial traditions [to be] preserved and transmitted at least long enough to enable those groups following them to grow, and to have the opportunity to spread by natural or cultural selection” (Hayek, 1988, p. 136).

Group selection also plays a role for the survival of the religions themselves. As Hayek points out, only those monotheistic religions survived, which supported property rights and highlighted the importance of the family. Societies practicing those religions developed further and prospered. Hayek does not trace back this impact to religion *per se*, although he speaks in favor of *specific* religions.¹⁴ Would he do so, he would accept immutable divine rules. Religions in his view are a means to ensure societal stability for a sufficiently long period to enable selection processes. Societies and their underlying rules have naturally evolved; they are not the product of human or supernatural will. All these rules are in constant change.

Modern Theories

Rubin (2002, Ch. 6) addresses the role of religion in human behavior; see also Guthrie (1993), Boyer (2001) and Wilson (2002). Since religious theories are untestable, societies can have any set of beliefs. However, some belief systems will be more successful than others, in that societies holding some beliefs will do better than societies holding other beliefs. This is an example of the sort of cultural group selection discussed above.

Religions were originally tribal. Members of a tribe would share beliefs in the same set of gods. Some religions taught that gods would punish individuals for certain behaviors. If these punished behaviors were economically inefficient, then

the tribe would prosper. For example, if a religion taught that theft (violation of property rights) and contract breach (violation of an oath) were bad, then the tribe with this belief would do better than a tribe with the opposite set of beliefs, or with no beliefs on such issues. Over time, religions with relatively efficient teachings should have come to dominate.

Religion is also a marker for tribal membership. That is, in original religions, those in the tribe were also members of the religion, and outsiders were looked down upon. Moreover, the moral and efficient principles discussed above would generally apply only to fellow tribe members. The next major change in religions was that some religions became more inclusive. They began allowing (or forcing) conversions, and treated converts as members of the tribe. The two great surviving religions, Islam and Christianity, both had this characteristic: both allowed conversion.¹⁵ By expanding the set of those with whom trade and commerce were possible, these more inclusive religions provided net benefits. Moreover, while there have been religions wars both between members of the same religion but different branches (Sunnis and Shiites, Catholics and Protestants) and between different religions, nonetheless, the greater inclusiveness of the modern religions has probably net reduced the amount of conflict in the world.

POLITICAL DECISIONS

Hayek

Until now, we have limited our observation to individuals acting with respect to the development of the societal order. We have described societal evolution as a result of individual selection as well as of group selection. We have so far largely neglected the importance of governmental action and collective acting regarding evolutionary processes. In order to understand the role of government from a classical liberal viewpoint, we need again to refer to the knowledge problem. Knowledge is widely dispersed in societies. Every individual, though being able to use more knowledge than he knows by adhering to traditional rules, utilizes only the amount of knowledge necessary to achieve his plans.

This raises the question of whether there is a mechanism that gathers all the dispersed information in a society. There are two answers: the government or the market process. Hayek strongly rejects the first choice and clearly prefers the latter. A market is a spontaneous order that through prices delivers to individuals all the information they need; it helps “to utilize the knowledge of many people without the need of first collecting it in single body” (Hayek, 1952/1979, p. 177). A market is therefore a transmitting system for dispersed knowledge – “an instrument

for communicating to all those interested in a particular commodity the relevant information in an abridged and condensed form” (Hayek, 1952/1979, p. 177). This statement has following implication: if the market system is an instrument of knowledge transfer and therefore an instrument for achieving additional subjective knowledge, it should be protected from any interference which distorts the price mechanism. Here exactly lays the main task of a government.

In order to fulfill this task properly, a government may provide and protect a legal framework. Legal frameworks offer the “rules of the game” that are valid for every member in a society and are intended to last for long periods. The framework consists of the Rule of Law, general principles laid down beforehand that enable the members of society “to foresee with fair certainty how the authority will use its coercive powers in given circumstances and to plan one’s individual affairs on the basis of this knowledge” (Hayek, 1944/1994, p. 80). These rules determine the conditions under which the available resources may be used. They do not, however, tell the individual for what ends they should be used. Examples of such rules are those governing private and criminal law; they also apply to constitutional codes and the Bill of Rights.

Moreover, there are rules in a society that are not legally fixed. These are called the moral rules and customs of a society. All these rules, together with public law, form the framework for individual and governmental action. The proper task of government in a classical liberal society consists largely of assisting individuals to achieve their plans and goals based on individual knowledge. To this end, a government should seek to improve the legal framework wherever possible. However, it implies that government should not suppress the selection process that leads to a new framework. The danger behind is that governments are likely to be much more in favor of an intervention.

The results of a selection process are largely unpredictable since neither politicians nor a majority of voters may act without cognitive limitations. Whenever government is not acting as a “government under the law,” its actions may turn out to be a means of coercion and of suppression of market processes. Interventionism as a political principle that pursues well-specified outcomes contradicts the mechanism of any spontaneous order and has therefore been rejected by Hayek. Though Hayek speaks in favor of interventions designed for well-defined and exceptional cases, he fears that such policies will eventually lead to an expansion of governmental action. Governmental interventions themselves bring forth new situations that need further intervention, leading to a vicious circle.

Political reality shows that the idea of a “government under the law” is an illusion. Modern democracies are not bound to the will of the voters but they are “bound to serve the several interests of a conglomerate of numerous groups” (Hayek, 1979, p. 99). Hayek argues in favor of limiting governmental power,

whether of democratic nature or not. Democracies are usually prone to become the playground for the many interest groups. Many of today's existing democracies are not subject to the division of powers between legislative and government and thus there is no "government under the law." Unlimited power usually helps to ensure reelection and to buy "the votes of particular interests, including those of some small groups or even powerful individuals" (Hayek, 1979, p. 101).

Together with these concerns, Hayek speaks about the reemergence of primordial instincts, already explained in the "morality of the small group." Those seem to take over the "morality of the large group" which results from selection processes. As we have seen before, these instincts have been gradually suppressed during the different stages of societal evolution. However, since people show more interest in terms like "social justice," redistribution, and a secure income for everybody, connected with a deep distrust of unintended outcomes from a market system, and especially for the market as a knowledge-transmitting system, the "morality of the small group" could gain more and more power. The danger of eroding the social order of developed societies is huge. He criticizes a system in which individuals earn their income not in the market but are part of large organizations and did therefore not submit themselves to the rules governing the extended order. He observes (Hayek, 1979, p. 165) that "to them the market economy is largely incomprehensible; . . . and its results seem to them irrational and immoral." As a consequence they call for a "just redistribution" based on what "everybody deserves": the seemingly immoral result of group selection is corrected by government, which in turn is now empowered to fulfill these expectations.

Modern Theories

Political decision making in large scale societies makes use of many of the mechanisms evolved in smaller societies. This often leads to political mismatches (Rubin, 2002, Ch. 7). For only one example, the political process pays excessive attention to identifiable individuals. For example, we may spend large amounts saving the life of one identified person when the same amount could save the lives of many more "unidentified" individuals. In the evolutionary environment, our ancestors lived in small groups of related individuals who would have known each other as individuals. In a hunting-gathering economy, there would have been ample scope for fitness enhancing income transfers. For example, if one individual had a successful hunt, then there might have been more food than he and his immediate family could consume. In this case, transfers would have benefited recipients more than they would have harmed donors. Moreover, in a society where storage of wealth was difficult or impossible, there would have been few incentives for

accumulation, again increasing the benefits of many transfers. In this environment, there would have been fitness increasing incentives for charity or contributions to welfare of others.

Members of the group with whom an individual came into contact would generally have been relatives, so that any transfer increasing the fitness of the recipient would have been selected for by kin selection. Moreover, since individuals would have known each other personally, “reciprocal altruism” (Trivers, 1971) would have been relevant. Note that any individual with whom one was familiar would have likely been a relative; there would have been no need to distinguish familiar strangers from relatives. Both of these factors mean that there would have been selection pressure for income transfers to known, identifiable individuals. That is, those of our predecessors who transferred resources to those they knew within the local group would have left more genes in the gene pool from which we are now selected.

On the other hand, as Moore (1996) points out, there is no reason to expect that we would have evolved to perform appropriate calculations to maximize fitness for a large amorphous group of unknown individuals. Such groups would not have existed in the EEA, and so there would have been no evolutionary incentive to learn how to maximize for such a group. The result is that we might expect contemporary humans to be adapted to providing benefits to recognizable, identifiable individuals rather than to anonymous or statistical individuals, even if the net benefit of the latter type of transfer is greater than the benefit of transfers to identifiable individuals. Moore has made the argument that this explains the emphasis of modern medicine on patient care rather than on prevention, and this argument seems correct. There are other implications as well.

Many policies provide concentrated benefits to a small number of citizens but impose diffuse costs on many. In many cases, the aggregate benefits to the few are much smaller than the sum of the costs to the many. Tariffs generate large incomes for import competing firms, but all consumers pay higher prices as a result. Such programs generate deadweight losses. Such programs have been studied in detail, but there are still puzzles as to their passage. In particular, there is no good theory explaining which groups are able to obtain benefits. At least part of the answer is in terms of the power of identified individuals in the political system. When a tariff is being debated, there are particular workers who will expect to lose, and they know who they are. Moreover, others observe them and see that they will lose. Rhetoric often stresses the benefits to these individuals. Potential gainers from abolition of the tariff are amorphous and anonymous, and so have less weight in political decision making. Similarly, when a union organizes, we can observe wages of union members increasing. These beneficiaries are identifiable individuals. Those persons who are denied jobs because of the higher wages are again anonymous,

and cannot be seen. Indeed, they themselves probably do not know who they are. Again, the identifiable individuals have a privileged position in the political process. This is perhaps a result of our intuitions favoring observed individuals over numerous anonymous persons.

Although Hayek and many economists stress the dangers of excessive government, it is important to keep these dangers in context. Throughout most of human existence (the long period of mobile hunter-gatherers) societies (or at least men) were relatively free. About 10,000 years ago with the rise of sedentary societies, kings and other leaders began to engross excessive power. Modern western societies are the freest societies that have existed since hunter-gatherer times; indeed, since modern societies give women as much freedom as men, these societies are the freest that have ever existed. Moreover, even within modern societies there is no clear trend towards increased government. For example, although economists stress the evils of tariffs, international trade is now freer than in the past. In the United States at least, the amount of economic regulation has recently decreased. Nonwestern societies are often much less free than western societies, and it is important to keep this in mind.

CONCLUSION

Like all evolutionary systems that deal with humans, Hayek's system is in two parts. First is the evolution of humans to the point where culture takes over. This is a strict Darwinian evolutionary system based on natural selection. Hayek's "dispositions," or tastes and preferences, evolved under this regime and these tastes still exist. Hayek has correctly stressed that many problems of current economic systems result because humans still have the tastes which served well in the evolutionary environment but do not function so well today.

Once humans reached the current level of development, cultural evolution took over. Although Hayek's theory of cultural evolution has some Darwinian insights, he emphasizes the Lamarckian rather than the Darwinian character (Hayek, 1988). The bottom line is that cultural evolution refers to the evolution of institutions and traditions, not to the biological development of the individual. Furthermore, such institutions, traditions, and the behavior which are correlated with them, cannot be inherited but only learnt through education and experience. From this it follows that an individual learns how to behave not only through his parents but also through teachers, peers and other persons. As Hayek (1988, p. 25) stresses, "Cultural evolution operates largely through group selection": different institutions compete with one another and the more efficient ones will survive. Nevertheless, the outcome of this process is not predictable. This makes his theory falsifiable: Hayek

predicts that the group practicing an efficient tradition will develop further and grow larger. However, it is only in the long run that it will become clear if an institution is efficient because it takes a long time to observe any reproductive advantage generated by adhering to efficient institutions. Moreover, the mechanism of group selection can easily be distorted. Man's innate instincts show deep scepticism against the outcome of open processes. This article has highlighted that these instincts may desire political settings in which governmental power leads to excessive redistribution and inefficient attempts at correction of all kinds of outcomes.

NOTES

1. See Gick (2003) for a thorough explanation.
2. Dispositions according to Hayek (1978, p. 40) are [t]he most convenient starting point . . . which makes an organism inclined to respond to stimuli of a certain class, not by a particular response, but by a response of a certain kind."
3. From Hayek (1988, p. 11), "These primitive people were guided by concrete, commonly perceived aims, and by a similar perception of the dangers and opportunities – chiefly sources of food and shelter – of their environment. They not only could *hear* their herald; they usually *knew* him personally."
4. See Gick and Gick (2001).
5. See Hayek (1979, pp. 153–176) and Hayek (1988, p. 12).
6. Hayek (1988, p. 12) compares such a behavior with instincts that apply "to the members of one's own group but not to others."
7. As Hayek (1988, p. 89) points out, "trade and commerce often depend importantly on confidentiality, as well as on specialized or individual knowledge."
8. Much of what follows is based on Rubin (2003).
9. Ridley (1997) argues that there was substantial specialization. But societies were too small to support much specialization until much later, when humans became sedentary.
10. Hayek (1988, p. 11) states "[M]an's instincts . . . were not made for the kinds of surroundings, and for the numbers, in which he now lives. They were adapted to life in the small roving bands or troops in which the human race and its immediate ancestors evolved during the few million years while the biological constitution of *homo sapiens* was being formed."
11. From Hayek (1978, p. 268), "These inherited instincts demand that man should aim at doing a visible good to his known fellows (the 'neighbour' of the bible) . . . The demand for 'social justice,' for an assignment of the shares in the material wealth to the different people and groups according to their needs or merits, on which the whole of socialism is based, is thus an atavism, a demand which cannot be reconciled with the open society in which the individual may use his own knowledge for his own purposes." See also Hayek (1988, p. 100) "Here again, although members of a primitive group may readily concede superior knowledge to a revered leader, they resent it in the fellow who knows a way to obtain by little perceptible effort what others can get only by hard work. To conceal and to use superior information for individual or private gain is still regarded as somehow improper – or at least unneighbourly. And these primitive reactions remain active long after

specialization has become the only way to make use of the acquisition of information in its great variety.”

12. The possibility of deviation depends on the degree of reputation (Hayek, 1979, p. 204, fn. 48). “Though present morals evolved by selection, this evolution was not made possible by a license to experiment but on the contrary by strict restraints which made changes of the whole system impossible and granted tolerance to the breaker of accepted rules, who may have turned out a pioneer, only when he did so at his own risk and had had earned such license by his strict observation of most rules which alone could gain him the esteem which legitimized experimentation in a particular direction.”

13. The criteria mentioned show Hayek as a follower of rule utilitarianism. See especially Yaeger (2001, Ch. 4).

14. For an accurate explanation see Gick (2003).

15. The third major religion, Hinduism, does not seek converts, but has grown through conquest and through the natural population increase of its adherents.

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