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THE OVERRATED REASON

BY
F. A. HAYEK

Consuetudo est quasi altera natura
M.T. Cicero
Les lois de la conscience que nous disons
Naitre de la nature, naissent de la coustume.
M.E. de Montaigne
Zwei Seelen wohnen, ach! in meiner Brust.
Die eine will sich von der anderen trennen.
J. W. von Goethe

I. INTRODUCTION

The innate instincts of man are not made for a society like the one in which he lives today. The instincts were adapted to a life in smaller groups, to which he was bound during the thousands of years of development of humankind. If man had continued to rely on these instincts, it would have been impossible to feed the numbers into which his species has grown. He has attained civilization by suppressing or controlling many of these "natural" instincts. The extended society is the result of the development of specific, transmittable rules of behavior, which tell him not to do what his instincts demand. This came about by a process in which new practices spread by transmission of acquired habits; a process analogous to biological evolution, but which is nevertheless different in many important details. The process of biological evolution would have been too slow in order to change or replace man's innate reactions during the ten or twenty thousand years in which some groups have attained civilization—not to mention the much bigger number of people whose ancestors have joined the process only a few thousand or hundred years ago. But as far as we know, everybody appears, more or less, to have the ability to attain civilization. Therefore, it seems unlikely that

Talk given at a symposium at Castle Kleβheim, Pentecost 1982. [In the original publication, the brief references in the text referred to an overarching bibliography for the symposium volume, which turned out to be incomplete. Thus, a few references could not be reconstructed; *noted by the editor Wolfgang Kerber*.] Translated into English by Evelyn Gick and Petrik Runst.

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civilization is genetically determined and would not have been equally acquired by everybody as cultural tradition.

At the time when cultural selection began, genetic evolution had most likely already equipped human individuals with a much wider variety of distinct or individual characteristics than non-domesticated animals; characteristics that were adapted to the many different environmental niches in which they had spread, and even before the increasing division of labor within groups has led to better chances of survival for non-typical individuals. It had also equipped man with a much bigger capability to learn from his fellow men. The stark lengthening of the period of childhood and adolescence was probably the last decisive step of biological evolution, until the learned rules prevailed over the innate instincts.

The instincts that the individual had inherited genetically served the purpose of directing the cooperation of the members of the small group, in which man and his closest ancestors lived in the few million years during which the specific physical constitution of homo sapiens has evolved. This was necessarily a close-knit cooperation of individuals who knew each other, and was led by their common perception of events they encountered together and that were recognized as a potential source of food or danger by all. The members of this small group could exist only as such: an isolated individual would soon have been a dead individual.

The primitive individualism as described by Thomas Hobbes is a myth. The savage is not "solitary" [emphasis in the original], and his instinct is collectivistic. For millions of years, anthropoids lived in small groups. With the primitive human, there never was a war of 'all against all,' and also not much individual thought. Only civilization brought about differentiation and individualization. Primitive thought mostly consisted of the small group members' shared sentiments. Modern collectivism is a relapse into this condition of the savage, an attempt to re-create the strong ties within the group, which prevents the formation of more extended but loose associations. In the small group, efforts had to be directed toward commonly perceived goals and by the same consciousness of the environment—even if the longer experience of the old may have granted them a dominating influence. This gave the instincts of solidarity and altruism a distinctive importance. They were not generally directed towards other people, but only towards the members of their own group. Common concrete goals and the shared perception of the environment in which they all lived and acted were the foundation for the practices that coordinated the actions of such a group.

The human ability to coordinate the actions of greater numbers than those found in the group of mutually familiar individuals was acquired because man developed practices that were different from the instincts that bound together the small group, and that, therefore, restricted these instincts or were even opposed to them. This came about as occasional changes in individual behavior were selected, which made it possible to coordinate greater numbers—changes that often required the suppression of instincts that, although supportive of the collaboration within the small group, proved to be impedimental for the enlargement of the groups. Such new rules could assert themselves and become widespread, *not* [emphasis in the original] because people *understood* that they were better, but only because they enabled groups that adopted them, possibly accidentally, to multiply through procreation and attraction of outsiders.

II. HABITS, NOT INSIGHTS

It is important to avoid the erroneous view that the ability to learn by imitation would be a question of intelligence. To learn a behavior is not a result of understanding but, rather, its source. Man acquires intelligence because there is a tradition that he can learn, and this tradition has its origin not in the ability to interpret observed facts. It tells him, first of all, what he ought to do or ought not to do under a certain set of circumstances, and not which events he should expect to happen. Because the members of a small group mostly act in unison, every individual must learn to participate in shared activity in order to survive.

The gradual replacement of innate, genetically determined reactions by learned rules of conduct was the process that differentiated man from other animals. The inclination towards instinctive crowd behavior is the most animalistic trait that man has retained. It was gradually replaced by the increasingly numerous learned rules of conduct that, nowadays, are followed as almost unconsciously as the innate instincts by the individual. We cannot draw a sharp distinction between these two determinants of behavior because they interact in multiple ways; some physiological changes took place because they helped man to utilize more fully the possibilities brought about by cultural evolution, such as phonetic articulation during the development of language. The animal ancestors of man had, without doubt, already acquired certain cultural traditions before they had become 'man,' considered in an anatomical sense. Such "cultural" traditions lead to the formation of animal societies, at least with birds and apes. But the decisive transformation from animal into man came about because the culturally determined rules of conduct were placed above the innate reactions.

The foundation for the existence of humankind in its current size and structure is the tradition of norms—rules, mostly in the form of prohibitions, that delineate personal areas of rights—which developed but were not designed in order to achieve this goal. These learned rules of conduct increasingly replaced innate reactions, not because man realized that they were better, but because they enabled the formation of larger groups: groups whose effective cooperation made it possible to maintain more members. For explanatory purposes, we call the small and primitive societies, which were mostly sustained by innate instincts, *micro-societies*, and the constantly expanding groups, based on learned moral rules, *expanded* or *macro-societies*. Analogous to the evolution of the biological traits of all organisms, the development of culturally transmitted rules of conduct was directed by selection toward forms, which made it possible to increase their numbers most effectively.

We must never forget, though, that the "large society" consists not only of individuals but also of loosely associated and often overlapping micro-societies, in which solidarity and altruism retain great significance, because they support voluntary cooperation, although they do not represent a suitable foundation for the extended society. It is our dilemma that we have to adjust our lives to two different types of order. If we applied the rules of the micro-society to the macro-society, as our instincts demand, we would destroy the latter. We must learn to live in two different types of order for which it is misleading to even use the same name. The extended society *cannot* emerge if we treat all men as neighbors, and everybody will benefit if we refrain from doing so, and if we replace the rules of solidarity and altruism with the rules of several property and honesty and truthfulness in our actions concerning others instead. The moral

imperative to treat everybody as neighbors would have prevented the emergence of the large society, which demands a transition from the community of concrete purposes to a community of abstract rules. Altruism and solidarity lose their moral quality when they have to be enforced because the common perception of goals is missing.

The difference between this cultural development and the conscious creations of human reason—of which the cultural development cannot be a result but the cause, to which the reason owes its existence—was not understood and led to the fact that a disproportionate importance was attributed to the role of purpose and planning in the formation of civilization. Although we cannot always distinguish the three strands of biological, cultural, and consciously conceived development, the common distinction between instinct and reason (or, in the discussion of the eighteenth century, "passions" and "interests")[1] has become a serious cause for misunderstandings in many ways, and we have to be especially mindful to avoid them. The primary alternative to instinct is not reason, but custom and tradition, which are not created by men, but are the heritage and result of evolution.

III. "NATURAL"—"ARTIFICIAL"

Early on, the process of learning rules of conduct must have led to a conflict with the innate instincts of man. Man had to be taught because his spontaneous actions would have been different. If innate instincts only were deemed "natural," as it usually happens, we would have to call the first steps of following learned rules "unnatural." It is good to recall that the original meaning of the Latin root of the word "natural," as well as the Greek root of the equivalent word "physic," stems from verbs that mean "develop, grow" (*nascor, phyo*), so that it would be entirely justified to call everything "natural" that has spontaneously grown and was not consciously planned by a mind. Under this aspect, our traditional morality is obviously "natural," and not "artificial" in the sense of being designed by a mind. Therefore, the scholars of the Middle Ages have called laws that were not consciously designed "natural law." But when "natural" is meant in the sense of innate, and when "artificial" is the result of a design, then the results of cultural development are neither one nor the other. This wrong dichotomy goes back to a classic tradition, which is also endorsed by Aristotle, who was not yet aware of the idea of evolution.

Growth is surely not an exclusive feature of biological organisms. From the proverbial snowball to the accumulation of sand through wind or water, or the emergence of mountains and the creation of complex molecules, nature is full of examples of increases in size or structure that are based on a process of growth. This feature is even more characteristic for the emergence of social structures. Conservative thinkers still like to talk of growth in this regard. This is etymologically and logically correct but the meaning of the word has become so vague that it is not of much use to us. Growth means a self-directed process, which takes place in a self-preserving structure. In this sense, cultural growth is analogous to physical and biological growth, but the word

[1]Compare A. O. Hirschman, "The Passions and the Interests" (Princeton: Princeton University Press, 1977).

"growth" suffers from the fact that it was used to describe a process that we could observe but not explain. It seems, therefore, better to restrict it to the description of processes, which we can observe, without asserting the claim that it represents an explanation of the observed processes.

The use of the expression "natural" for describing the results of cultural evolution is misleading, and should better be avoided. Cultural evolution must be understood as a distinctive process, which, in many ways, is more similar to genetic or biological evolution than the developments that are guided by men in anticipation of the consequences of one's action. The comparison of cultural and natural development easily leads into a trap that has been immanent to the tradition of European thinking since antiquity, which sees the only alternative to an "artificial" development as a consciously planned development by man—which cultural evolution is not—and one that is called "natural" development because it is based on a permanent and invariable trait of man. It was this interpretation of "natural" that led to the conceit that "Man makes himself"[2]; the constructivist interpretation that represents the foundation for much in socialist thought. Although this is an advance over organismic "explanations" that simply replace one unexplained process by another unexplained process, we must now recognize them as two different types of development.

This faulty dichotomy of "natural" and "artificial," just as the similar and related dichotomy of "sentiment" and "reason," is highly responsible for the unfortunate neglect of the exosomatic process of cultural evolution, which produces moral traditions that, in turn, determined the emergence of civilization. The true alternative to sentiment is not reason, but the adherence to traditional rules, which are not the result of reason. The development of a tradition of rules of conduct for the difference between instinct and reason is a peculiar process, which never received appropriate attention because it was erroneously regarded as a product of reason.

The similarity between a social order and an order of organisms in nature was often seen and debated. But as long as we couldn't explain how ordered structures in nature developed, the observed analogies couldn't be useful, and "organism" theories were rightfully rejected as obscurant because they simply replaced one unsolved mystery with another. The process of selective development gave us the key to an understanding of the emergence of an order of life, reason, and society. Some of these orders, as with the one of reason, can be capable of designing orders of a lower level, but are in themselves results or orders of a higher level. This insight also shows us the limitations of our abilities to explain or design an order belonging to a lower level in the hierarchy of orders, or our inability to explain or design one of the higher orders.

Unfortunately, David Hume has chosen the expression "artificial" for what we call cultural [probably taken from the expression of common law writers: "artificial reason"], and thereby created misunderstandings; he was, therefore, regarded as the founder of utilitarianism, although he emphasized, "Tho' the rules of justice be *artificial*, they are not arbitrary,"[3] and, for this reason, it is not inappropriate to call them "natural law." He was anxious to protect himself against erroneous constructivist interpretations, as he explained: "I here only suppose those reflections to be form'd at once, which in fact

[2]Compare V. G. Childe, "Man Makes Himself," London, 1936.
[3]David Hume, *A Treatise on Human Nature*, edited by T. H. Green and T. H. Grose. Two volumes. (London [1739] 1890), vol. II, p. 258.

arise insensibly and by degrees."[4] His solution was what the Scottish moral philosophers called "conjectural history"[5]—and which, since then, has been called "rational reconstruction"—and he used it to an extent that can be misleading (and which only his younger contemporary, Adam Ferguson, systematically learned to avoid). In many ways, Hume comes close to an evolutionary interpretation. He noted, "No form, you say, can subsist, unless it possess those powers and organs requisite for its subsistence: some new order or economy must be tried, and so on, without intermission; till at last some order, which can support and maintain itself, is fallen upon," and, "Why should man ... pretend to have an exemption from the lot of all other animals? A perpetual war is kindled among all living creatures,"[6] and must continue. As was noted quite correctly, he noticed practically that "there is a third category between natural and artificial, which shares certain characteristics with both."[7]

The temptation to explain the functioning of a self-organizing structure by showing how such a structure could have been formed by a creative mind is very high, and it was also the sole explanation a primitive mind could give. It is, therefore, understandable that some followers of Hume interpreted his expression "artificial" in this way, and built upon it a utilitarian theory of ethics, according to which, man consciously selected his morality according to its recognized usefulness. But it is odd to attribute such a view to the thinker who emphasized that "The rules of morality, therefore, are not conclusions of our reason."[8] But a wrong interpretation was quite natural for a rationalist such as C. A. Helvetius, from whom Jeremy Bentham admittedly derived his constructions.[9]

Modern advances in the field of natural science showed how right the American scholar Simon N. Patton was when he wrote, eighty years ago: "Adam Smith was the last of the moralists and the first of the economists*, so* Darwin was the last of the economists and the first of the biologists."[10] But Smith proved to be more than that. The example he gave for the explanation of biological processes became, from then on, a new, powerful instrument in many other areas of scientific endeavors. Adam Smith's greatest contribution to scientific thought, his image of a self-ordering process, which, as an invisible hand, creates complex structures, became the starting point for foundational sciences known under the names "cybernetic," "general systems theory," "synergetic," or "autopoiesis." But until today, it remained the target of mockery, also among economists, who have not yet comprehended that it is the main problem that any explanation of the order of our society has to solve. It was another great economist who noted, a little more than 100 years ago, "This genetic element cannot be separated

[4]Ibid., vol. II, p. 274.

[5]Compare F. A. v. Hayek, "The Legal and Political Philosophy of David Hume." In F. A. v. Hayek, *Studies in Philosophy, Politics and Eonomics* (London, Chicago: University of Chicago Press, 1967), pp. 10–121.

[6]David Hume, *The Natural History of Religion and Dialogues Concerning Natural Religion*, edited by A. Wayne Culver and J. V. Price (London: Oxford University Press, [1876] 1976), pp. 212, 221.

[7]K. Haakonsen, *The Science of a Legislator* (Cambridge: Cambridge University Press, 1981), p. 24.

[8]Hume, *A Treatise on Human Nature*, vol. 2, p. 235.

[9]Compare D. Baumgart, *Bentham and the Ethics of Today* (Princeton: Princeton University Press, 1956), p. 357; C. W. Everett, *The Education of Jeremy Bentham* (Columbia: Columbia University Press, 1931), p. 110.

[10]S. N. Patten, *The Development of English Thought* (New York: Macmillan, 1899), p. XXIII.

from the concept of theoretical sciences."[11] It was mostly because of these efforts that we understand the formation of social structures, which is what I termed the twin conception of evolution and the spontaneous formation of order[12]; these are the main tools for the analysis of such complex phenomena, for which simple and mechanistic laws can provide only insufficient explanations.

This development has determined the general methods of modern natural science, so that a recently published report of a scientific conference stated: "For modern natural science a world of things and perceptions became a world of structures and orders."[13]

IV. THE NON-DARWINIAN CULTURAL EVOLUTION

Although cultural evolution is analogous to biological evolution in many aspects, it is, as it was correctly emphasized, "a process quite different from biological evolution, with its distinct laws, mechanisms and modalities, and unable to be explained based on a purely biological foundation."[14] While Charles Darwin was undoubtedly the first who introduced the notion of evolution in an indispensible theoretical book, in which he explained the formation of complex structures in a certain domain, the fundamental idea is much older; it was known in the study of cultural phenomena such as language or law, from where Darwin probably derived his ideas. In the nineteenth century, the social scientists, who needed Darwin in order to learn what they should have learned from their own predecessors, did a disservice to the progress of the theory of cultural evolution with their "social Darwinism." "Social Darwinism" has been rightfully discredited, but not every application of the term "evolution through selection" is derived from Darwin; as much as I admire Darwin, I must nevertheless ask the reader to refrain from calling my presentation of cultural evolution 'Darwinian.' Even if one wanted to emphasize the analogies with biological evolution, the theory of cultural evolution would have to be called 'Lamarckian' and not 'Darwinian' because it entirely rests on the transmission of acquired characteristics, which, at least in the modern version of Darwinian thought, is rejected entirely. (To be precise, the word "heredity" does not have the same meaning in both fields. Genetic transmission and cultural transmission progress differently, even though, as we will see, the selection criterion is the same.) It is even more important that the theory of cultural evolution does not deal with the development of individuals (the 'survival of the fittest,' as did social Darwinism), but with the development of procedures, or, in short, with a tradition. Insofar as development progresses through individuals, everybody will derive his cultural heritage from

[11]C. Menger, *Investigations into the Methods of the Social Sciences* (New York: New York University, 1985). Also compare his earlier usage of the expression "genetic" in his paradigmatic explanation of the origins of money.

[12]F. A. Hayek, "Dr.Bernard Mandeville." In F. A.Hayek, *Freiburger Studien. Gesammelte Aufsätze* (Tübingen: J.C.B. Mohr [Paul Siebeck],1969), p. 128.

[13]Simon (1980). Also see the conference report for the meeting of the German Natural Scientists and Physicians, to which he refers. [Reference could not be reconstructed, compare footnote on first page, the publisher.]

[14]Huxley,(1947, p. 23). [Reference could not be reconstructed, compare footnote on page one.]

many others, and over longer periods from hundreds or thousands of others, and not just from his physical ancestors.

However, the most important difference between the majority of genetic evolution and cultural evolution is the fact that genetic evolution deals with selection of individuals, while group selection is being challenged by some geneticists, although without this framework some phenomena, such as the asexual worker bee, seem hard to explain. Cultural evolution is entirely based on group selection. The action of man towards his fellow men must not only benefit the acting individual alone if it is to lead to an expansion of the group, which follows new traditions. Oftentimes, new practices have unintentionally created new opportunities for others, and spread thereby.

However, one common principle holds for both biological and cultural development as well: for both, selection is determined by a condition that biologists call "reproductive advantage," which is the increased success of reproducing offspring. Furthermore, they have the most important attribute in common, but because of it they are so often misunderstood and, therefore, it cannot be emphasized enough: none of them is subject to 'laws of evolution' in the sense of a necessary sequence of steps, through which the developmental process needs to proceed. Although this notion—which derives from the pseudoscientific theories of Hegel, Marx, and Comte, and is still taught by Marxists—is oftentimes confused with a theory of development, it has nothing to do with it and is entirely incompatible with it. An explanation for a process of continuous adjustment to unknown and unpredictable random conditions can lead only to the conclusion that the results are also unpredictable.

V. REASON DOES NOT LEAD; IT IS BEING LED

The opinions in these subjects are still influenced by the naive view that, at a certain stage of development, man's awakening reason took the lead and guided any further developments by consciously choosing effective behavioral practices. But there is something that man was never able to foresee or plan, and that was his own future. Our thinking concerning these questions is still influenced by the idea that, at some point in time, the human soul, or reason, settled into the animal body and took over further developments, as if man had suddenly acquired reason. But the common explanation of the sequence from cultural to genetic or biological evolution neglects the most important part of the former when the human intellect was formed, and thereby gives the erroneous impression that, at a certain stage, mindful planning began and that man had since become capable of choosing the best path for his further progression. Rather, a correct explanation of evolution ought to show how, in a mostly unconscious process, men who habitually did the things that were most conducive to their prospects of propagation were selected for reproduction.

Custom is older than reason, and although it is based on experience, it does not stem from knowledge of the facts or from a sort of consciousness that things were related in certain ways, but from the habit to respond to external events in a way in which men could maintain themselves in the past. Cultural development is mostly an unconscious process; a process in which individuals were selected just as much through luck or fate as in biological evolution.

The belief that "man made himself," in the sense that he was clever enough to select the path toward civilization, a belief that was characteristically taken on as a slogan by some socialists,[15] is an erroneous illusion in which intellectual pride about one's own creation makes man believe that he can and will exchange the existing civilization with a better one. In fact, however, he does not even understand to which circumstances he owes what he enjoys. Surely, the ones who promised us a better world hardly have any knowledge of the circumstances to which we owe our personal existence.

That the rules of moral conduct are attributed to rational design often expresses itself therein, that reason, of which morality is said to be the result, is contrasted with instinct. But the rules of conduct that have emerged, and on which civilization is based, stem neither from what we call the 'unconscious' or 'intuition,' nor from rational understanding. Although our actions are guided by what we have learned, it does not mean that we understand why we act in a certain way. Practices that we have learned as little children become just as much a part of our personality as what has already guided us when we began to learn. The emergence of an order of human action beyond that which can be overseen by anyone is not an achievement of human intelligence, but the effect of rules that men learned to follow blindly, because those who followed them survived in larger numbers. Culture, as well as intelligence, is not a genetically transmitted attribute of the species homo. The single individual is endowed only with the capability to acquire skills through learning.

Also, the similarity of some cultural attributes common to all man is not evidence in favor of genetic determinism. It is possible that there is exactly one kind of certain essential conditions for the emergence of the extended society, just as the development of wings, for example, seems to be the only way to be capable of flight. (The wings of insects, birds, and bats are of significantly different genetic origin.) It is just as possible that there is only one way of developing a phonetic language, so that the existence of certain common characteristics of all languages does not necessarily stem from inherited attributes. Where would our intelligence be without language, which we have learned, and which was certainly not planned by our intellect?

VI. INEQUALITY CREATES ORDER

If I assume that selective evolution leads to an increasing emergence of order, this term shall mean a condition as I have defined it before[16]: "a state of affairs in which a multiplicity of elements of various kinds are so related to each other that we may learn from our acquaintance with some satial or temporal part of the whole to form correct expectations concerning the rest, or at least expectations that have a good chance of proving to be correct." A non-recurring constellation is not an order in the Kantian sense of a "merging according to rules," even if our senses perceive it as a pattern. Certain characteristics must recur regularly if we hope to draw conclusions about the unknown parts based on what we know. Therefore, not every recognizable pattern,

[15]R. L. Heilbronner, *Between Capitalism and Socialism* (New York: Random House, 1970), p. 106.
[16]F. A. Hayek, "Law, Legislation and Liberty." In *Rules and Order*, vol. 1 (London: Routledge & Kegan Paul, 1973), p. 23.

which may be unique, can be called an order; it is not an order if a part of the whole does not tell us anything about the rest.

In the case of kinetic energy, where elastic particles are constantly colliding and deflecting, the result is a complete disorder (maximum entropy, a condition in which all free energy disappears because of differences in temperature). The same argument also shows that there will be a tendency of a progressively greater order if these particles possessed another, weaker, force, which could possibly make them stick together when they collide. All that is necessary to form these structures that contain two or more particles in ever-increasing numbers is that particles collide in a way in which it is somewhat more likely that particles combine, instead of being separated by the collision with others afterwards. If such combinations of primary particles themselves can fuse in order to become even more complex structures, which possess different levels of coherency, a system of increasing complexity will result.

The emergence of ordered structures presupposes both the diversity of the connected units and that the coherency of some of these different units is stronger than others. Diversity among the single units can develop even if the original particles are completely equal, as long as they can combine randomly in different ways. If some of the ways in which random chance combines separate particles are more likely and also more coherent than others, a progressive tendency toward an order will emerge: greater order (and inequality) will be produced by greater chances of durability ("survival") of those kinds of structures that have the greater capability to maintain or restore their coherency. In contrast to the second law of thermodynamics, we get a permanent transformation from non-order to order.

Inequality of the elements will always bring about an order (it is even presupposed by the notion of order), and it will give an advantage to the coherent structure over the same number of unconnected elements. The increase in the number of complex structures results, therefore, from a selection process in which the possibilities for that are ever-expanding; or: through the emergence of ever-more complex structures, the possibilities are continually increasing while the number of complex structures increases. Even if this process had begun with identical particles, as long as random chance can combine them in different ways and thereby create possibilities for the permanence of certain structures, it would lead to a process that, through differentiation,would result in an increasing appearance of order and regularity (this is the time aspect of order).

Such a combination into more complex structures, as it occurred with the hypothetical, primitive elements, will also occur with the more complex structures (and possibly with some of its composing parts). The result will be a cumulative process, which will generate a hierarchy of structures, of which those that have the greater coherency or elasticity will have the tendency to protect its components against destruction more effectively. To become a component of a greater structure will, therefore, increase the probability of continued existence of its parts and their progressive reproduction. From the atom, which is protected by the molecule, the cell, which is protected by the organism, to the individual, who is protected by society, we find a hierarchy of superimposed orders whose continued existence can be sufficiently explained by a process in which those random variations were selected, for which an encompassing structure provided a protective shell.

VII. TRADITION CREATES EVOLUTION

The insight that certain structures can multiply only because similar structures already exist, which can transfer (with small changes) their characteristics to others, and, therefore, these abstract orders will be able to evolve in a process during which they transition from one material state to another, and they develop only because the pattern already exists—this insight has given our interpretation of the world a new dimension: "the arrow of time."[17] In the course of time, new characteristics of the world will emerge that did not exist before, but they become permanent elements: self-sustaining and self-developing structures, which, although they are represented by certain material embodiments at any point in time, become independent entities that will permanently persist in their different manifestations. This new element in our thinking—for which the Darwinian developmental theory became the paradigm and which we are only slowly learning to apply to the interpretation of human values and human thinking—is slowly replacing the static Aristotelian worldview. The capacity to develop structures through a process of replication gives a reproductive advantage to those elements that possess this capacity. Elements will be selected that are able to build more complex structures; and the reproduction of the members of such structures will lead to the development of even more complex structures. If a model appeared in this way, it would become a permanent part of the structure of the world as every other material thing—it could well be that the different material things that make up our world today are nothing else than a different arrangement of the same elements. In human society, with which we are here concerned, the patterns of action of groups are determined by the practices that are transmitted by individuals from one generation to the next. These orders can preserve their general character only by permanent change ("adaptation"), and, although they are abstract because they are identifiable by their general common characteristics, they become a component of the world that is just as real as their concrete objects.

Here, we will mostly deal with the development of those customs that made the extension of society possible beyond the common knowledge of its members: the introduction of private property as a method to use dispersed knowledge in order to build supra individual pattern; a development that replaces the effort to have a common opinion and a common goal, and which enables the use of dispersed insight and skills. We still hesitate to believe that we owe the emergence of civilization to the destruction of ties that kept the small group together, and that are still deeply rooted in our feelings. How little people's understanding of the effects of these actions led to their acceptance is reflected in the fact that ignorance is still the main reason against the source of civilization in the doctrines of socialism: it is this demarcation of private property that enables the separation of knowledge through which individuals have command over an alterable stock of means, and will, therefore, build a pattern into which their fragments of knowledge blend together without giving the impression of being homogenous and deliberate.

The opposition to this system stems from the fact that the emerging order is the result of a competitive process in which success, and not the endorsement of recognized individual merit, determines the outcome, and in which the success of some is

[17]H. F. Blum, *Time's Arrow and Evolution* (Princeton: Princeton University Press, 1951).

necessarily paid for with the failure of others who are just as meritorious. But the steps in an evolutionary process toward something that was previously unknown cannot appear just because the success that gives an advantage to some was mostly unintended and unpredicted. This aversion to random outcomes, which is inextricably connected to every process of experimentation, makes people wish to take control over the process and to bring it into accordance with their wishes.

The problem of cultural evolution is the formation of a tradition that is not innate but that is passed on through teaching and imitation. Men are not born good and wise, but need to be taught and disciplined to become wise and moral; and it was certainly not the case that man's intelligence enabled him to discover the morality that brought forth the extended society; on the contrary, it was this large structure that enabled him, by submitting himself unknowingly to morality, to acquire knowledge that gave him increasingly more power over his environment. What we call reason today was formed by cultural evolution; reason didn't lead cultural evolution.

Once we understand that self-replicating and abstract structures are actually characteristics of the objective world that are the basis of the direction of further developments, and, although they are usually not perceived by our senses, are not constructs of our mind but are facts that have to be discovered, then a lot will make sense that seemed incomprehensible to a 'materialistic' view. We not only start to recognize that abstract things have a very real, objective existence, and are not mere products of our minds, but also that our ability to recognize those abstract structures in the real world constitutes reason. Reason is tradition, one of the many transmittable patterns or structures that develop and can persist indefinitely, although the material manifestations in which they temporarily exist must perish. Intelligence is not the source of order but order is the source of intelligence, which, in turn, is a suborder that can reflect the characteristics of the more comprehensive order so that its possession can flourish within it. Or, to state it differently, order does not require reason, as the animistic and anthropomorphic view of the world assumed in the past, but reason is itself one of the grown, ordered structures that provide an individual with a kind of model or map of the world in which he moves, and which enables him to interpret the different events that affect his senses and to adapt his reactions to complex structures of alternative expectations of events that follow his different reactions.[18] Once self-replicating orders develop, they increase the chance that more orders of this kind will develop by protecting and promoting the increase of the constituting suborder, and they will become in this way particular objects that contribute to the development of the cosmos in which they occur.

In our scientific view of the cosmos, abstract structures (the 'bodyless figures' of the world of ghosts) are replacing personified ghosts, souls, or gods that primitive thinking needed to bestow on them with this peculiar kind of ethereal substance. But our resistance to the idea that the intangible or abstract can have real existence is erroneous. Only forms or structures determine, through transmission and modification, the process of forming even more complex orders that are capable of subsequent alteration, in which they won't preserve identity but similarity. It is worthwhile stressing this because the results of cultural evolution are abstracts in this sense.

Our understanding of how the process of selective evolution works taught us that the mind is not the determinant factor but the result of this process. This general notion

[18]F. A. Hayek, *The Sensory Order* (Chicago: University of Chicago Press, 1952), 5.1–5.49.

of selective evolution stopped the animistic view that the existence of an order implies a plan, a view that is developed on the basis of constructivism and socialism. Although, in a certain stage of evolution of human thinking, it might have seemed clear that results can influence events to the degree that they could be predicted by reason, we can now understand that the existence of orders or structures can be determined by their effects, or, to say it differently, that during evolution an effect can become the cause (*causa finalis*) of the predominant structures.

For modern science, all objects, all apparently stable structures that we can distinguish as different things, are products of the past, products of a gradual process of self-formation—not the product of a planning reason, which is itself a product of the same evolutionary process. This slowly arising insight has reached its first climax in the neo-Darwinian explanation of organisms, but the development of the implications of the general idea will remain a task for science for a long time to come. Now we need to be aware of the fact that we move in a world of objects, which remain what they are only because of a continuous process that adjusts structures, so that they preserve their cohesion in a resistance against shocks from changes in the environment, in that they retain a condition of homeostasis[19] or dynamic equilibrium.[20]

It is not very important for our present purposes—and we surely do not know how much of the abstract structure we call 'reason' is genetically transmitted and incorporated into the physical structure of our central nervous system, or to what extent it merely serves as a container that enables us to absorb the cultural tradition. It may be called into question to what extent we can say that a human individual who did not have an opportunity to absorb cultural tradition may possess reason. In a broader sense, both genetic and cultural transmission may be called 'tradition.' But, for our purpose, it is important to note that a conflict between those two traditions exists, especially between that primary part of cultural tradition that made the large expansion of society possible and the development of rational thinking; for example, of those learned limitations that the rules of behavior impose on the other, older, and inborn impulses that are determined by genetic tradition.

It was certainly not our intellect that created our morals, whose workings we still understand only quite imperfectly, but the interplay of men, dictated by morality, that made possible the emergence of our reason. Morality is the learned mastery of our instincts, and the concept of morality makes only sense when we contrast it with results stemming from impulsive and unreflected behavior, but also rational thought. Innate reflexes have no moral quality, and socio-biologists who apply words such as 'altruism' to them (and who, in order to be consistent, should, therefore, view the sexual act as the most altruistic one!) talk nonsense. Altruism becomes a moral term only when we want to say we ought tofollow our altruistic emotions.

Tradition is the foundation of the extended or market society, which transcends the borders of organized states, and which is a result of social development, and not of conscious organization of everything that can really be called social such as language and morality, law and family, the market and money—all these formations that nobody has invented and whose function we still do not entirely understand today as we

[19]W. B. Cannon, *The Wisdom of the Body* (London: Kegan Paul), 1932.

[20]L. v. Bertalanffy, *General Systems Theory, Foundation, Development, Application* (New York: Braziller, 1968); and L. v. Bertalanffy, *General Systems Theory* (Harmondsworth: Penguin, 1971).

understand the function of man-made machines. The tendency to disregard tradition as a rightful source of our values, and the claim that reason can serve our wishes directly without the mediation of a tradition of morality became, although descending from the constructive rationalism of René Descartes, the dominant motif of "progressive thinking" only because of the great anti-moralist and seducer, Jean Jacques Rousseau, who wanted to free mankind from the "artificial" restraints, which, however, created civilization. His invention of the fictitious *will* of the people, or "general will," through which the people become "a single being, and individual,"[21] this conceit—elevated to theory by Hegel, Marx, and Compte's positivism and a "sociology" that aims at the formation of "a future for mankind or … to create it"[22]—has led to the belief that man, like the famous Baron Munchhausen, is capable of pulling himself out of the swamp of tradition by pulling his own tuft, and to the propagation of this Munchausen Syndrome, which was expressed most clearly by B. F. Skinner when he said that "man is able, and now as ever before, to lift himself up by his own bootstraps."[23]

Subsequent:
Oral amendments to the preceding written presentation:

VIII. SELECTION OF RELIGIONS

Now to the point of this symposium. During cultural evolution, the individual has not only inherited his traits from his physical parents, but from hundreds and thousands of ancestors. Although I owe my knowledge and my skills in part to my parents, I also owe them to the preceding and current generations.

The selection mechanism of cultural evolution is mostly group selection, which might play a role in biological development as well. But there remains no doubt that only a group as such, and not the individuals, are selected during cultural evolution, in which the development of the extended society depends on the fact that the relations between men are leading toward a new structure.

What is inherited by cultural evolution is, at first, behavioral practices of individuals; but they are bequeathed because these practices crucially contribute to the emergence of social institutions, and what cultural evolution has indeed created are structures such as language, law, morality—that which we usually call 'institutions' in the broader sense of the term. It is a developmental process of institutions, the foundation for the formation of the so-called extended society, a process where man often flatters himself that he created it on the basis of his intelligence, which, however, took place without man's ever understanding what has actually happened. Man has never invented his morality. David Hume clearly emphasized this point: our morality is not a product of our reason. In this context, he has outlined an evolutionary theory, which was then further developed by the Scottish philosophers, especially by his pupils, Adam Smith and Adam Ferguson, but also by others.

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[21]J. J. Rousseau, *Social Contract* (1762, I, VII); K. R. Popper. *The Poverty of Historicism* (London: (Routledge & Kegan Paul, 1944–45). German Translation: *Das Elend des Historizismus* (Tübingen: J.C.B. Mohr/Paul Siebeck, 1982).
[22]T. T. Segerstedt, "Wandel und Gesellschaft," *Bild der Wissenschaft* 6 (1969): 5.
[23]B. F. Skinner, "Freedom and the Control of Men," *The American Scholar* 26 (1955–56): 49.

In these aspects, cultural evolution is always different from biological evolution. But there are still other phenomena in which evolution is very similar, yet they are usually not understood: the principle of selection of cultural evolution is the same as the one in biological evolution. Those traits that contributed most to the reproduction of the human race were selected. In the same way as biological traits of the body developed if they supported procreation and if they supported what biologists like to label with the expression 'reproductive advantage,' cultural elements did also select according to the principle that naturally those human groups have multiplied faster that developed institutions favorable toward their procreation. I am willing to argue in favor of the somewhat heretical thesis that all of our morality is based on the fact that the behavioral practices that have asserted themselves were the ones that have supported a multiplication of those groups that have adopted these practices—to increase at the expense of other groups, to displace them, initially by various peaceful means, but, if necessary, also through physically stronger organization. This is the first and most important aspect that the theory of cultural evolution and Darwin's theory of biological development have in common.

I would like to add another point, even though it is of a different nature; that is, it is rather negative than positive. There are no laws, neither in the biological, Darwinian theory of development, nor in the cultural theory of cultural evolution. One must not confuse evolutionary theory with the laws of development à la Hegel, Marx, or Comte. The basic nature of evolution is such that we are dependent on an adaptation to unforeseen conditions or changes, and therefore precludes the possibility that an evolutionary theory can lead to laws of evolution. Evolution is unpredictable, and the mixture in the dominant opinion between development in the legitimate sense of a theory of evolution, and the laws of evolution that tell us in which direction we have to move, is sheer confusion.

The idea of evolution of institutions raises two main problems, on which I will exclusively focus here. If, as I have emphasized and as I want to repeat, the development of culture, and especially the development of the rules of morality that made the formation of the extended society possible, do not rest on human insight, how did it happen that certain moral traditions that preach a kind of behavior that the individual did not understand could nevertheless sustain themselves throughout the centuries? I shall give an answer, which I have to introduce with a general remark in order not to be misunderstood. I will say that the only solution for this problem was religion. What I need to add in order not to be misunderstood is that I, personally, am an agnostic. Nevertheless, I am convinced that we owe the development of culture exclusively to religious belief, without which there would not have been cultural development. I am convinced that humans owe their cultural development to the fact that they believe what they cannot prove, and the modern crisis is due to the emergence of a rationalism that is derived from René Descartes: do not believe in anything you cannot understand or justify. Man owes his cultural development to the fact that he accepted justifications that he could not prove, and that he followed a belief. Only this belief has contributed to the development of a tradition for which there is no scientific justification. Vicious critics of religion would say that, strictly speaking, one has to admit that man owes his development—the development of his population size, just as the development of his culture—to *superstition*; family, property—the key to success.

I deem it appropriate to note that symbolic truths, which cannot be tested scientifically, were capable of bestowing an effective advantage in life, so that these groups were able to fulfill the biblical mission, "Be fruitful and multiply, and fill the earth and subdue it."

I sometimes talk of the natural selection of religions because there were a number of attempts to start religions. Among the thousands of religions, only those were successful that have included a moral belief in private property and family. These religions prevailed because they were successful, not because they were convincing intellectually. It is, of course, a fact that all big religions today, the large monotheistic religions and the religions of the Far East, base their morality firmly on the idea of private property and family. The thousands of other revolutionary founders of religions who surface periodically—communism is the last form, of course—and who combat private property and family, have never succeeded permanently. The hundred years since communism came into effect is a very short period of time, from the perspective of history, and I dare to say that we are witnessing the decay of communism already today. I would like to share a perhaps not quite appropriate story. A few weeks ago, I met a very smart Russian in London, who came to the West for the first time and who spoke fluent German, and whom I asked what he found most surprising. His answer was that so many people in the West still believed in Marxism—"Back home nobody believes in it any more!"

You probably will ask now: but why don't you accept the religious justification, which you deem to be so important? As I have hinted at previously, I simply have trouble ascribing meaning to words that are used in religious contexts. I, for example, always emphasize that I am certainly not an atheist. I would thereby have to denounce something that I don't understand. I cannot claim that there is a god or that there is no god because I do not know what the word means. But because it helps so many people, and it obviously has great meaning for them, I have never contended it, and I have never attempted to convince somebody that he is wrong. I cannot spend more time on this point, although it is, of course, highly relevant for the topic of this symposium.

But, more importantly, it appears to me, is the question: why did these beliefs, which man could not justify, survive for so long? And the answer is: because they were supported by religious belief. This also answers the question why, among all the religious doctrines that were founded and championed at different times, only those survived that were built on the institutions of private property and family. The reason why the family was selected was probably the same as the reason for why the selection of private property was advantageous: those rules of moral conduct were selected that supported the multiplication of humankind. This is surprising in a time in which population growth has become a source of worry and fear of the future, a time in which people worry about population growth rather than being happy about it, as they have done in the past.

IX. MALTHUS' SIGNIFICANT NONSENSE

I am sorry that the science I have to represent, and to which I have dedicated a large portion of my life, has misled people on this matter. The Malthusian theory of population, which, even today, is still the source of the idea that population growth is a

terrible danger, rests on the kind of oversimplification that often takes place at the beginning of a science but that one should not keep for too long, however. The Malthusian theory of population entirely rests on one assumption: we have a limited amount of land; this land is worked by human labor; the increase of this factor of production will lead to a diminishing productivity if the other factor of production remains constant. This is, to put it mildly, nonsense! Human labor is not a factor of production, but represents a multitude of productive factors whose numbers and varieties are constantly multiplying, just as the human race multiplies. The view that the current multiplication of humankind leads to an increasing scarcity of raw materials, and, in the end, to misery, is simply wrong. In fact, what happens is that—expressed in market values—the raw materials become cheaper and human labor becomes more expensive, which means that the scarcity of raw materials is ever decreasing, and the scarcity of human labor is ever increasing; industrial products fall somewhere in between: they are neither as scarce as human labor nor in as much abundance as the ever-cheapening raw materials.

I sometimes have to laugh about how the same people who complain about the injustice that is done to the developing countries because the prices of raw materials are ever decreasing state in the same breath: we should care more about the future of raw materials, and should not sell them cheaply and below cost. In fact, there is no reason to fear that, under present conditions, the increase in population will lead to impoverishment; it never did, except in those cases where the increase in population was not the result of a free development, but was supported artificially. If we support the multiplication of the population in the southern Sahara desert today, where the natural endowment is already insufficient, then we will cause a catastrophe there, but it will never happen where the multiplication of the population was made possible by an increase in productivity. And, under most circumstances, increases in productivity are the result of a multiplication of the population. Only a dense population can achieve the division of labor and accomplishments on which we depend today. It was the multiplication of the population that enabled the division of labor. Either in the form of an actual physical density in a region, or in the form of the expansion of the means of transport, they all were developments that led to a continually increasing division of labor and made this division possible.

An increase of population leads still today to an increasing division of labor. I am willing to claim that there is not a single historical example in which the multiplication of the population has contributed to a decrease in wealth. This might sound surprising, but will become clear for the following reason: it has often contributed to the decrease of the average prosperity because the development of prosperity helps mostly the poor, and the poor multiply much more rapidly than the rich. Therefore, it is possible that in a society in which all classes have increased, where all classes have even become richer, the poor have become so much more prosperous than the rich that the average population income fell. The model is best represented by a right-angled triangle that displays wealth on the vertical axis, and the number of people in each wealth category on the horizontal axis. In a certain moment, we have a triangle with very few people in the top portion, and more and more in the lower strata. During the multiplication of the population, the hypotenuse becomes more slant, the base of the triangle expands, the poorest increase the most, the less poor less so. The result is a decreasing average income—and this is the case even if all the existing groups have become wealthier.

This, by the way, means that the principles of property and private economy have helped the poor the most: they have given them the gift of life. They would have never been born, could have never lived, if a market economy had not contributed to the strongly augmented productivity of our society.

When the Marxists tell us that capitalism has created the proletariat, they are correct in a certain way—not in the sense that they claim, as if capitalism had ever expropriated the proletariat; but it has given them life. It has created the means through which a greater number of people could stay alive; it is the basis for the multiplication of the population, and the proletariat owes its life to capitalism.

X. THE MARKET ECONOMY FEEDS BILLIONS

I believe that we must acquaint ourselves with the fact that the current economic order, and the morality on which it is based, the morality of private property, honesty, and the keeping of promises, is the foundation of the development of the current world population; that if, today, four billion people are alive compared to perhaps ten million people twenty thousand years ago, this is an achievement of the market economy, which has shown us how to feed more people, and which, with a strange cumulative process, has initially created more people—and then recognized that with more people, the productivity could be increased by more than the sheer number of people, and that, therefore, a new foundation for population growth was offered. I believe that the whole world-dominating, panic-like fear of population growth is not justified. I can understand how one can be terrified of it for esthetic reasons; for example, about the way landscapes will change when more and more people exist. But I believe that our fear is certainly not morally or intellectually justified. As long as we assume—must assume—that most people who are born into this world are thankful for their existence and that the goal of human efforts and all our morality is the preservation of life, then we must not fear the increase in population in the present condition, but must view it as joyful and desirable; at least as long as it is determined by the wishes of the individual parents, and is not perceived as a burden by them.

I have certain doubts about the morality that is supposed to hinder parents, and reduce the number of their children. But even this is not a real conflict because the problem revolves around the methods only and not the principle. But the basic perception that population growth is a great threat and an imminent danger for existing mankind, I believe, is false and incorrect. It is false because of scientific insight! And I am happy to add that, independently of my own efforts, which led me very slowly and over a long period of time to these conclusions, the same conclusions have now been drawn by American scholars of population theory. I find my somewhat boldly made claim that population growth has never led to impoverishment is statistically confirmed in particular by author Julian Simons, who has, for the most part, justified the same ideas in two books,[24] but has undertaken much more precise statistical research.

[24]J. L. Simons, *The Economics of Population Growth* (Princeton: Princeton University Press, 1977); J. L. Simons, *The Ultimate Resource* (Princeton: Princeton University Press, 1981).