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*Constructivism and selection: two opposed theories
of social evolution.*

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In his *Historico-Genetic Theory of Culture* (2011), Professor Guenter Dux advocates a processual or constructivist logic of historical development in opposition to what he calls an absolutist logic of development. In an absolutist developmental logic, all the subsequent features of a process are already contained within its origin, so that its history is simply a kind of unrolling of what is already there in the source, like a house being built from a blue-print. He advocates instead, as I do, a constructivist theory in which development is generated in non-teleological ways whereby radically new formations can emerge.

He does not, however, discuss natural selection – a type of evolutionary theory which is also strongly opposed to absolutist developmental logic, but which has nothing in common with constructivism either. In the last forty years or so Darwinian theory has been increasingly applied to human social evolution, and in the first part of this paper I would like to explain how it differs from constructivism, and why it is wholly unsuited to explaining the evolution of society and culture.

1. Applying natural selection to human society.

Boyd & Richerson (2006), Mesoudi, Whiten, & Laland (2004) and many others consider that the evolution of human culture can be explained by natural selection because it has the key Darwinian features of **variation, selection, adaptation, competition, and inheritance**, leading to **the accumulation of successful modifications over time**. These concepts form a tightly integrated logical system: *Variation* is essential for Darwinian evolution, because only when there are two or more variant forms can there be *competition*, and therefore the opportunity for *selection* to find the best *adapted* of the variants, so that evolution proceeds by the accumulation of *inherited* successful adaptations.

It should be noted that variation is assumed to occur by random mutation within the organism, not by any internal causal process, or influenced by any learning from previous successes or failures, nor is it a direct response to, or affected by the environment. This means that there can be no inherent pattern or direction in sequences of variations, which can only come from selection. Treating variation as blind or random denies, in particular, the possibility of orthogenesis, meaning ‘a steady trend of evolution in a given direction over a prolonged period of time, affecting related groups of organism, due to the working out of inherent trends within the inherited material’ (Abercrombie *et al.* 1973:204). It should also be noted that mutation is essentially a *punctiform* change in one gene and in the trait or traits governed by it, so that we cannot explain it as the result of a *combination* of causal factors, as we shall see is the case with social change and invention.

It is easy to see that this theoretical model can be applied very neatly to the population of a species, whose members have variant forms – let them be light and dark moths. Dark moths will be harder for birds to see against a background of tree-trunks blackened by industrial pollution, and because they are better adapted they will therefore have a reproductive advantage over the competing light moths. Over time the dark moths will therefore come to dominate the population, while the light moths will be selected out.

According to the Darwinian model, therefore, evolutionary development occurs by the selection of variant traits in individual organisms, whereby the relative frequency of competing traits in the population of the species may change over many generations, leading to a notion of evolution as the accumulation of successful modifications over time. Populational thinking is therefore crucial for the Darwinian model, and biologists suppose that social systems, too, can be represented as populations of traits.

(a) *The relevance of the populational model to socio-cultural systems*

A culture, therefore, is seen merely as a *population* of traits and their variants which are located in the brains of a population of human beings, in a precisely analogous way to the population of genes and their variants in the gene pool of those human beings. ‘Population thinking is the key to building a causal account of cultural evolution...In the same way that evolutionary theory explains why some genes persist and spread, a sensible theory of cultural evolution will have to explain why some

beliefs and attitudes spread and persist while others disappear' (Boyd & Richerson 2006: 6). Social evolution therefore simply involves selective changes over time in the relative frequencies of cultural traits, just as it does of the relative frequencies of genes in the gene pool. Now social systems are, undeniably, populations of individual human beings, in the trivial sense that without people societies could not exist. And of course it is also true that in order to participate in a culture its individual members have to store large numbers of pieces of information in their brains. But this information is not just locked up in individual brains, like genes in a body, but also forms shared conceptual *systems*, composed of institutions, roles, values, beliefs, and so on, and all members of the society conduct their relations in terms of these.

A system, however, is not just a population of information, any more than an automobile is just a population of parts. For example, as they grow up, members of all societies have to learn and remember words like 'mother', 'father', 'brother', and 'sister', but these words are not just isolated bits of information – like, perhaps the names of flowers – but are the connected parts of a system: a mother is also a wife, and a wife has a husband, who is the father of their children, who are brothers and sisters, and their mother's brother's children and father's sister's children are different types of cousin (matrilateral and patrilateral cross-cousins). Not only do these terms form a system of relationships, but they are also a system of social roles and categories, with each of which certain patterns of behaviour are associated. People may be obliged to marry their matrilateral, but not their patrilateral, cross-cousins, and will have different duties to their cognatic and their lineal relatives, and to their affines, for example, and all these roles will be governed by a variety of norms such as respect, sharing, shame, and avoidance. The other members of the society have the same mental map of the kinship and marriage system, so that they are all actors within the constraints and opportunities of what we may call the same social landscape.

For example, in matrilineal societies, where membership of the lineage is inherited in the female line, the men of the lineage still control its property. But while a woman's brothers control the lineage property, she must take her husband from a different lineage, because marrying within her own lineage is considered incest. So her sons cannot inherit any property rights from their father, but they inherit these instead from their *mother's brother*, with whom they may go to live when they grow up. Because of these rules, marriage in matrilineal societies therefore inevitably involves a conflict over the control of women between their husbands and their

brothers, so that the marriage bond is inherently much weaker in these societies than in patrilineal societies, because a woman's brothers are not particularly interested in who the father of her children may be, or if he is faithful, as long as she produces children. This weakness of marriage is not the product of individual psychology, nor was it selected for, but is the logical outcome of the system of rules of matrilineal organisation (see Hallpike 1984:136-42).

The fact that social systems (and belief systems, and technologies) have structural properties of their own therefore fundamentally conflicts with the populational model of social evolution, because counting the relative frequencies of cultural traits tells us nothing at all about the structural properties of the system and how it works, about the importance of a trait and its *effects* on the rest of the system. In these causal relationships, some aspects of social systems are *causally* much more important than others; for example, the adoption of agriculture had very profound consequences for the kind of social organization that could be constructed, and the same is true for the consequences that followed from the adoption of the industrial mode of production. It cannot be sufficiently emphasised therefore that the explanation of social evolution is far more concerned with the *consequences of innovations* than with their relative frequency. Population thinking, in fact, makes it impossible to understand cultural evolution at all.

(b) The linking of variation and selection

In Darwinian evolution variation and selection are quite distinct processes, but in sociocultural evolution they are closely linked together, so that variation is not random but produced by the same factors that influence selection. As we have seen, the individual human beings, who bring about the transformation of their social environment, have also assimilated the institutions, values, and beliefs of the society in which they have grown up. In human society, therefore, variation and selection are merely two sides of the same coin, so that the society in which someone invents the steam engine is the same society in which a steam engine is likely to be popular and successful. The same factors are common both to variation and to selection.

This essential feature of social evolution is a radical change from the mode of biological evolution, and only when we fully grasp the active agency of the individual in both assimilating social structures, and in changing them, can we really see why natural selection cannot be applied to social evolution. Since, in social evolution,

variation and selection are linked together, so that new variations can build on old ones, this opens the door to the possibility of strong directional, orthogenetic tendencies in social organization towards, for example, greater size, internal differentiation and division of labour, hierarchical organisation, and political centralisation.

(c) The merging of ontogeny and phylogeny

The existence of these orthogenetic evolutionary tendencies in human society is also quite incompatible with another fundamental characteristic of biological evolution – the distinction between phylogeny and ontogeny, between the development of the species and of the individual organism. The changes that occur in the ontogeny of organisms are restricted to those laid down by the individual genome, whereas phylogenetic changes in the species require the death and reproduction of millions of individual organisms over hundreds or thousands of years to produce evolutionary change in the design of the members of the species. This sort of evolution can very reasonably be described as ‘an accumulation of successful modifications over time’. But the birth and death of individual members of human societies has, as such, no special relevance to changes in the design of their society, which is a set of conceptual structures that are basically immortal. Conversely, the same individuals in the course of a single lifetime can participate in one form of political order – a monarchy, for example – and then participate in its revolutionary transition into a republic. Evolutionary changes in societies are therefore produced by the same sorts of processes as make up the transactions of ordinary daily life, as though a reptile could become a bird in the lifespan of a single organism, so that the distinction between ontogeny and phylogeny ceases to exist.

d) The limits of adaptation.

The concept of adaptation is crucial in the Darwinian model, which assumes that competition is rigorous so that the maladapted traits will be selected out. While human cultures, too, are full of adaptive devices like electric light and automobiles, these are the result of conscious trial and error and are adaptive because we have designed them to be so. This type of conscious adaptation is not Darwinian, of course, but anthropologists used to believe that the unconscious, unplanned, processes and practices of human societies are adaptive in a genuinely Darwinian sense, because they are supposed to be produced by natural selection. As one anthropologist

expressed it, 'sociocultural systems are largely if not exclusively composed of positive-functioned, that is, useful traits' (Harris 1960:61), because if they were not useful they would have been selected out. Since warfare, for example, was typical of primitive society, it was assumed that it must have an adaptive value, and the job of the anthropologist was to discover what this was: increasing social solidarity was one favourite solution, and redistributing natural resources was another.

But in human society we have no reason to suppose that these sorts of orthogenetic developments like warfare or cycles of competitive feasting will necessarily be adaptive. This is partly because selection is much weaker than in the natural world, and also because we cannot assume that the members of societies must automatically act in ways that are for the general good. In an organism, each cell has the same DNA, which dictates the function it is to perform in the particular organ of which it is a part. People, on the other hand, act for their own interests and in terms of how adequately they perceive their social world. While the great majority will not be actively anti-social, there is no reason to suppose that the social processes they collectively generate will automatically tend to be adaptive either. For example, as societies increase in complexity, especially with the rise of the state, inequality increases, but there is no reason to believe that a situation in which 5% of the rich own 95% of the resources of a society has any adaptive explanation. It is simply the result of certain widespread social causes, and to assume that it exists because it is adaptive is unjustified. Slavery has been one of the commonest social institutions, but while slave-owning may have been adaptive for the masters, it was hardly adaptive for the slaves or even, indeed, for the economy of the wider society.

If we find some social practice or institution that seems to bring many disadvantages, rather than assuming that it must be adaptive, it is therefore more sensible to conclude that it really is maladaptive, and simply the product of internal social processes that may actually be very common. Rather than trying to find *adaptive* explanations for practices and institutions, in the biological manner, historians have found it far more illuminating to look for their antecedent conditions and their consequences.

So if the Darwinian processes of variation, selection, and adaptation cannot be the basis of social evolution, we will have to look elsewhere for an explanation, and I have already indicated where this will be – to orthogenetic processes within societies that on the one hand can explain the directionality of social evolution, but on the other

can also explain why it has been so uneven, and hardly occurred at all in some cases.

2. A constructivist account of social evolution.

We are now in a position to summarise in general terms what a constructivist account of social evolution would look like. Far from being ‘the accumulation of successful cultural modifications over time’, social evolution has been ‘the transformation of social structures over time’. The process we are trying to explain, at least in outline, is the transformation of human social systems from those of a common base of hunter-gatherer bands of roughly 10,000 years ago, through tribal organisation to the simple non-literate states that developed in many different parts of the world. By the beginning of the Common Era, in a number of unrelated parts of the world, literate civilisations had evolved with a fairly standard set of institutions: sacred hereditary kings; a nobility; professional armies; urban civilisation and a market economy with highly developed crafts; writing; bureaucracy; priests or their equivalents; monumental architecture and temples; and a particular interest in calendrical science and astronomy, so that the Chinese, Indians, Europeans, and Central Americans would have found many fundamental similarities in each other’s societies. As social systems become more complex, the possible ways of constructing them become more limited, which is also why there is much more uniformity among states than among tribal societies, and even more among industrial societies. All this suggests that similar developmental processes have been at work, and I shall now very briefly summarise what I think these were by way of introduction, before I expand on them in more detail.

It is first necessary to be clear that such a constructivist account has to accept as given, certain innate¹ behavioural and cognitive qualities of human beings, because these govern what individuals will find the easiest or most difficult to do. For example, Darwinists typically claim that according to evolutionary theory, human beings must have evolved to be fundamentally selfish, striving to maximize their inclusive fitness by reproduction and nepotism. But studies of actual human behaviour, especially that of children (e.g. Tomasello 2009), show that, whatever evolutionary theory may say, while we must obviously act for our own preservation and well-being, we also have highly developed capacities for sympathy, co-operation, and group loyalty. But while this capacity for sympathy and co-operation makes group formation very easy, it also makes it very easy for sentiments of hostility to develop towards those who are perceived as outsiders in some way. An extreme

sensitivity to personal reputation is also a basic feature of human nature, with associated tendencies both to conform to social expectations, and also to love status, honour, and a sense of social superiority. Threats to status and reputation, therefore, are major causes of social conflict.

‘Social learning’ is quite unlike the passive manner in which we inherit our genes. It has become very clear from the work of Piaget and other developmental psychologists that children actively construct their own representations of the physical and social worlds from early ontogeny onwards. Since social systems can only be maintained and transmitted by individuals, the way in which these individuals understand their social world must have a profound impact on how that world is constructed. The ontogeny of individual cognitive development therefore interacts with the formation of collective representations and social institutions in a way that can have no parallel in biological evolution, producing a circular relationship between individual ontogeny and cultural phylogeny. The level of culture that a society can maintain will therefore depend among other things on the cognitive development of its members (see Hallpike 1979 for an extended discussion).

In order for social evolution to occur, certain basic changes have to occur in social systems. The most important of these changes is in

1. *Social size*. A very obvious difference between hunter-gatherer bands and modern industrial societies is that the first comprise only a few dozen individuals, while the second may have hundreds of millions of individuals. Size is the basis of, among other things, increasing social complexity, and internal differentiation and complexity: ‘A correlation between the level of civilisation and the size of the society has been made on numerous occasions,...and it seems clear that civilised societies cannot be small societies.’ (Dumond 1965:313), and in the first instance size depends on:
2. an *economy*, agriculture, that can support a *large* population that is also *sedentary*. *Settled* societies make it possible for crafts and associated technology to develop, as well as urbanism, and the more complex manifestations of culture such as literacy. But large numbers of people are not in themselves enough to produce increased social complexity, since it is quite possible for large populations to live in small and simply organized groups that are scattered across the landscape. Social complexity initially requires:

3. *Differentiated corporate groups*, which will be primarily based on descent, age, gender, and residence. These groups make it possible to impose conceptual order on large populations of many thousands, and also may provide the basis for:
4. *Political centralisation*, which depends in particular on the development of *hereditary* authority, supported by religious status. Increased centralisation of authority allows the co-ordination of much larger populations than is possible simply with differentiated groups such as clans and age-grades, and a corresponding ability to harness much greater economic output by the people, to be used for a range of public works and technological advance. This political authority will be augmented by the redistribution of tribute, and especially by
5. *the development of markets*, and the availability of luxury goods, and trade, which encourages people to produce more than they need for mere subsistence.
6. *Warfare and its leadership* are also major factors in augmenting hereditary political authority.

In other words, we are first of all looking here at a set of conditions that have to be in place *if* further evolutionary development is to take place. Of course, it does not *have* to take place at all, and in many parts of the world we find societies that have remained at very simple levels of development and survived perfectly well. Social evolution is therefore a process of construction which represents *the accumulation of necessary conditions*, but necessary only for further development, not for survival. Secondly, this approach is not interested in quantitative success or failure, like that of dark versus light-coloured moths, in the survival or extinction of some cultural trait. On the contrary, it is concerned with *evolutionary potential*, the possibilities of further development, and the possible consequences of this for the particular social system.

But the realisation of evolutionary potential does not depend on the rigorous competition that gives adaptive efficiency central importance as the basis of selection in the Darwinian model. If, in fact, the level of competition itself can vary greatly in human society, then widespread customs or institutions, such as magic or the vendetta, may not necessarily have proved themselves in the rigorous struggle for survival – it may be that there are simply frequently recurring features of human nature and society that produce them. And if conditions are undemanding, then it will

be easy for the inefficient to survive indefinitely because competitive pressures are low. Rather than the survival of the fittest, we often have *the survival of the mediocre*.

In tribal society there is great latitude for many organizational variations, all of which will work after a fashion, because social groups are organized around certain principles of symbolic order based on descent, relative age, birth order, and gender, rather than on the more rationalised order of the state. It is just because technology is so simple, and political organization is decentralised, that tribal society is free to organise itself in a much wider variety of ways than early states and modern industrial society, all of which will be viable.

At this point the question may well be asked, 'If in primitive society more or less anything goes, why should social evolution have a direction at all?' But if we cease to be obsessed with competition and adaptation, and realize that it is easy, especially in a primitive milieu, for a whole range of mediocre practices and institutions and beliefs like magic to survive, then we are free to look in quite another direction. This is the possibility that a way of doing things, whether it is a kind of technology or a type of social organisation or an idea, may also have the unsuspected potential of doing other things as well, which will disclose themselves later when changed circumstances are favourable. Competition focuses upon the victory of the winner over the loser, but this is often very misleading, because in many cases the loser provides the very basis for the winner, and the means by which it comes into existence. We begin to think, in other words, of *construction* rather than selection, of how new and more complex systems of all kinds are built up.

3. The emergence of centralised political authority.

We can now consider in more detail the evolution of hunter-gatherer bands into tribal social organisation through the adoption of agriculture and the domestication of animals, to illustrate the advantages of using a constructivist set of concepts instead of those of the Darwinian evolutionary model. I have given such attention to the evolution of centralised political authority because the emergence of the state, like agriculture, has enormous evolutionary potential.

The emergence of agriculture from hunting-and-gathering probably occurred for a variety of reasons associated with the perceived attractions of more permanent settlement (see in particular Hallpike 2008b:52-65). The demands of agriculture enhance co-operation through such activities as clearing forests, preparing the soil,

building fences and houses, and harvesting crops. It seems to be a universal rule that mingling one's labour with something, like clearing land or planting trees, establishes a good claim to ownership of it, by a group or an individual, and the idea that these rights can be perpetuated by inheritance is also universal. One of the commonest rules of inheritance is patrilineal descent, and since in all societies it is men who control the descent group's land, the patrilineal rule combines inheritance and control very neatly.

With the emergence of lineal descent groups, birth-order and seniority attain a new importance that they did not have in hunter-gatherer society, where there was no property to inherit, and no authority to exercise. In every family the eldest child has an advantage in dominating younger siblings, particularly since age-differences of three or four years are common because of birth-spacing. In farming societies the eldest son typically has a superior status to his younger brothers, and this easily leads to the development of a senior line within the descent group, and the head of the senior line may be seen as having a special spiritual relation to the lineage founder as well.

The founder of a descent group has special status as being first, and whose fertility is expressed in his descendants, who are like a great tree springing up from a potent root. The ghosts of the lineage founder and other ancestors are widely believed to have power to punish and reward descendants; ancestor worship is very common, and the head of the lineage or clan may therefore have ritual responsibility for blessing his kinsmen and ensuring their prosperity, as well as settling their disputes and allocating the descent group's land. None of this was the result of variation and selection; seniority of birth is neither adaptive nor maladaptive but just an inevitable result of the elementary dynamics of family relations, while descent groups were the easiest and immediate route for organising access to land and resources.

Descent groups are also the basis of radical inequality: for example, one clan may be considered superior to all the others because their ancestors were the original inhabitants of the group territory, and allowed the ancestors of the other clans to come and live there. Some clans may be regarded as the begetters of junior clans, or some clans may have special functions, such as priests or war-leaders, and the leader of the senior clan may become a paramount chief, owed at least ritual respect.

We can therefore see how it is possible for hereditary political leaders to develop on the basis of lineal descent groups and seniority, supported by religious

status. These beliefs and values give such leaders the property of *legitimacy*, which is the idea that their authority is rightfully or properly exercised, and is an essential support for power and social inequality in all societies. Typical functions of such leaders would be presiding over the allocation of clan land, dispute settlement, spokespersonship for their group, and ritual responsibilities.

Political authority is also strengthened by the economic mobilisation of the family unit, where chiefs receive tribute in the form of food and livestock, and which they redistribute to their dependents as hospitality and to relieve poverty. In subsistence economies, the family is the basic unit of labour, and can basically produce all the food, fuel, and shelter that it needs. In this situation people naturally prefer leisure to work because there is nothing they could get by working harder. One vital aspect of social evolution therefore involves the integration of the family into wider productive networks that can be used by chiefly authority to strengthen its influence and power.

The other very significant factor in increasing a chief's power is warfare. Being a successful warrior by itself could not be a source of political authority in a kin-based society, but where chiefly authority already exists, legitimated by descent and religious authority, if it could be combined with war leadership this was a very important way of enhancing the chief's political power.

In a survey of 21 early states Claessen found that in the vast majority of cases the ruler's status was justified by genealogy; that he had sacred status; that he was closely associated with warfare, either as the real or nominal commander; and that trade and markets were of major significance in consolidating the power of the ruler (Claessen 1978), and these are clearly among the most important of the necessary conditions for state formation.

Those who object to the whole idea of social evolution have said that if there were any general principles they should apply to all societies, but clearly some societies, such as surviving hunter-gatherers, have hardly evolved at all, while others are in various intermediate positions between them and modern industrial states. The answer to this objection is that if the evolutionary process requires the accumulation of necessary conditions, we can also expect to find many instances where such conditions are not present.

4. Core principles

In all societies descent, relative age, seniority of birth, the relations between the sexes, rules of residence, authority and leadership, ritual status, and property rights are issues on which some rules and categories are developed, and on which different emphases will be placed. We find that in every cultural tradition there emerges a distinctive world-view, a set of ‘core principles’ about social organization, values, and beliefs in terms of which subsequent generations continue to interpret the world despite migrations and new environments. Comparative studies show that these core principles can last not just for hundreds but for thousands of years, and will be highly relevant to the emergence of centralised political authority (see Hallpike 1986:288-371; 2008b:115-20).

For example, Polynesian and Melanesian societies are based on very different core principles, which explain why political centralisation was much more developed in Polynesia than in Melanesia, although the traditional economies of both cultural groups were very similar: horticulture based on combinations of yams, taro, breadfruit, bananas, coconuts or pandanus nuts, and pigs.

In Melanesia the whole ideology of lineal descent tends to be rather vague, so that the Tauade words for ‘kin’, for example, also meant ‘friend’, and seniority of birth is not an important social principle.

The characteristic western Melanesian “tribe”, that is, the ethnic-cultural entity, consists of many autonomous kinship-residential groups. Amounting on the ground to a small village or cluster of hamlets, each of these is a copy of the others in organization, each tends to be economically self-governing, and each is the equal of the others in political status. The tribal plan is one of politically unintegrated segments – segmental. (Sahlins 1963:287)

Local residential groups tend to be small, normally limited to around two or three hundred, and a few square miles in extent. If clans exist they tend to be less important than the bonds of friendship and co-residence. Leadership is exercised by Big-Men, but they are not installed in a public office by inheritance – eldest sons have no special significance – or by formal election: their influence over their followers is purely personal, and depends on the leader’s individual qualities: ‘[A] man must be prepared to demonstrate that he possesses the kinds of skills that command respect – magical powers, gardening prowess, mastery of oratorical style, perhaps bravery in war and feud’ (ibid., 291) Most important, the Big-Man must be able to organise his faction to produce hospitality and food, especially pigs, in the public distribution of wealth, to gain renown for generosity. This sort of leadership is inherently unstable, because it disappears as Big-Men get too old, and their competition with other Big-

Men can make economic demands on their own followers that leads to resentment and rebellion against the Big-Man.

In Polynesia, on the other hand, ‘Polynesian social structures are literally built upon the principle of seniority. Kin groups are traditionally organized around the relative seniority of descent lines’ (Goldman 1970:15). Patrilineal descent is very clearly defined, the superiority of the eldest son is a basic social principle, and the political structure is based on a hierarchical clan structure with hereditary chiefs of varying rank:

Local groups of the order of self-governing Melanesian communities appear in Polynesia as sub-divisions of a more inclusive political body. Smaller units are integrated into larger through a system of inter-group ranking, and the network of representative chiefs of the subdivisions amounts to a co-ordinating political structure. So instead of the Melanesian system of small, separate, and equal political blocs, the Polynesian polity is an extensive pyramid of groups capped by the family and following of a paramount chief. (Sahlins 1963: 287)

Unlike the small local groups of Melanesia, the politically autonomous bodies typically number between 2 – 3,000, and the 10-20,000+ of incipient states like Tonga and Hawaii, with territories varying from tens to hundreds of square miles.

Chiefs inherit their office by primogeniture, and it has a variety of traditional rights and privileges: ‘The chiefly lineage ruled by virtue of its genealogical connections with divinity, and chiefs were succeeded by first sons, who carried “in the blood” the attributes of leadership [*mana*]’... ‘His authority came from the organization, from an organised acquiescence in his privileges and organized means of sustaining them’(ibid., 295). He commanded the labour and land of his people by right, and did not have to build it up by reciprocal gift-giving, as did the Melanesian Big-Man:

The division between small internal and larger external political sectors, upon which all big-man politics hinged, was suppressed in Polynesia by the growth of an enclaving chiefdom-at-large. A chain of command subordinating lesser chiefs and groups to greater, on the basis of inherent social rank, made local blocs or personal followings (such as were independent in Melanesia) merely dependent parts of the larger Polynesian chiefdom...While the island or the archipelago would normally be divided into several independent chiefdoms, high-order lineage connections between them, as well as kinship ties between their paramount chiefs, provided structural avenues for at least temporary expansion of political scale, for consolidation of great into even greater chiefdoms (ibid., 294).

It was also hard for centralized political authority to develop among the Iroquois-speaking tribes of North America. They had hereditary chiefs who were the heads of matrilineal descent groups, controlled trade routes and their clan’s treasury of prestige goods, were responsible for organizing public ceremonial and religious

rituals, and providing generous hospitality, and acted as spokesmen for their community in diplomacy with other groups. Yet they were not paramount chiefs with significant political power because of a number of other features of Iroquoian society. In the first place, the Iroquois, like many peoples of eastern North America, made a very important distinction between peace chiefs, such as the ones I have been describing, and war chiefs who, as the name implies, were responsible for the conduct of raids, and the torture and killing of prisoners and witches. This distinction 'had to do with the idea that violence and maintaining order were incompatible from the cosmological point of view'². The peace chiefs were elected from the chiefly line by the older women of the clan, and there was a general ethos of equality: 'at all levels of Iroquoian society, care was taken to avoid the appearance of coercion or of one person being given orders by another'(Trigger 1990:132). It seems that the women of the clan tried to avoid electing chiefs who might become too ambitious, and could depose them if they did. In addition, while peace chiefs may have organized rituals of increase, they had no personal monopoly of sacred powers and many other people officiated at these rituals, while shamans were also very important sources of supernatural power.

Again, the core principles of the societies that speak East Cushitic languages of Ethiopia, such as the Konso, have some distinctive features that made it very hard for them to develop chiefdoms (Lewis 1974, Hallpike 2008a,). The Konso live in about three dozen large villages which are divided into three regions, and at the head of each region is a leading ritual authority, *poqalla*, who combines priestly and legal functions. They performed essential rituals for all their region, blessing its members and the pair of sacred drums that in each region were symbols of peace, and had to observe a number of taboos including the requirement to live in isolation outside the villages. They were particularly rich because they inherited especially large estates, and were given tribute by the villages of their region, and also collected tax from local markets. They could intervene in battles between the villages, and also act as judges in disputes between individuals of different villages but could not take any part in warfare, either its conduct or its planning, and had no armed supporters to enforce their decisions, because, as in the case of the Iroquois, bloodshed was seen as conflicting with their sacred status as bringers of peace. They were not the leaders of any of the villages, nor were they the heads of any of the nine clans of the Konso: these clans did not own land and the members were dispersed among all the villages,

so they were not effective corporate groups. The fact that the regional priests could not be war leaders, did not have a potential power base in any one village, and were not the owners or controllers of clan lands were important factors preventing them developing into chiefs with real political authority.

The Konso villages were the real centres of power, but their decision-makers were councils of elders elected for their personal qualities, not the lineage heads, and the councils and the warriors of each village were also organized on the basis of the age-grading system. Certain legends suggest that the Konso age system was adopted, at least partly, as a means of restraining what might become the arbitrary authority of the *poqalla*, and age-systems are inherently egalitarian. The fact that political authority, then, was elective, non-hereditary, and based on councils and the age system, were further reasons why its centralization could go no further.

It is therefore very significant that whereas all the East Cushitic-speaking neighbours of the Konso had age-systems, and no kings, (with one exception that emerged in strange circumstances), the West Cushitic-speaking societies all had kings and no age-systems (Straube 1963). The clans in West Cushitic society also had much greater political importance: there was a royal clan, below which were commoner clans, with some slave clans at the bottom. Not only were West Cushitic clans of ranked status, but far from being scattered like those of the Konso, their members were all located in specific territories, with local hereditary clan leaders who controlled the allocation of land. The West Cushitic king was not only the religious head of his people, but also their war leader; in some cases it was believed that the royal dynasty had been there from the beginning of time, and in others that it had achieved its position by leading the conquest of the original inhabitants. In many of the societies speaking West Cushitic languages, then, the state did develop, notably in Kaffa and Janjero, and this is because in these societies the descent principle was paramount, residence was dependent on clan membership, the chief and subordinate clan heads controlled the land, there was no form of age-system, and the chief was not only the supreme religious figure but could also combine his religious status with that of being a war leader as well.

Polynesian and West Cushitic societies share a number of features that clearly favour political centralisation: well-defined patrilineal corporate descent groups, hierarchically organised on the basis of seniority and primogeniture, and living on their clan land; the sacred status of chiefs; the combination of sacred and military

authority; and the acceptance of hereditary inequality. On the other hand, in the case of the Melanesian, Iroquois, and East Cushitic societies, descent groups are vaguely defined, or lack hierarchical structure, or are dispersed, or matrilineal, and primogeniture may not be important, while the principle of descent may be in conflict with that of age, and the ethos of the society may be basically egalitarian. Authority may not be in the form of inherited office, but have to be earned by personal qualities, and either lack sacred authority; or there may be a conflict between sacred and military authority. None of these cultural characteristics is maladaptive, but they are all hindrances to the centralisation of political authority.

5. Conclusions

The Darwinian model focuses, in particular, on the competition between cultural traits, and the selection and accumulation of the successful ones over time, which from the anthropological point of view simply does not address the realities of socio-cultural evolution. The evolutionary model which I propose focuses instead on the developmental possibilities of a cultural trait, its evolutionary potential, either alone or in combination with others. As a final example I will cite the control of fire, which was not of great technological importance when it was confined to cooking food. But cooking was an essential precondition for agriculture, because the first domesticable plants were cereals and tubers, and these are rich in starch that needs cooking to be digested. So no fire, no agriculture. Fire was also a necessary precondition of pottery and the smelting of metals, and a whole range of further technological developments, such as glass-making, explosives, and steam power. But this idea of something being the pre-condition of further developments simply has no place in the Darwinian model of variation and selection.

Some may object, however, that such a theory is merely reviving the long-discredited idea of 'historical inevitability'. In a famous passage, the great historian H.A.L.Fisher said 'Men...have discerned in history a plot, a rhythm, a predetermined pattern...I can see only one emergency following upon another as wave follows upon wave...There can be no generalizations, only one safe rule for the historian: that he should recognize...the play of the contingent and the unforeseen' (Fisher 1936:v).

It is perfectly possible, however, for a constructivist theory of social evolution to be directional without being teleological in the manner that Fisher envisages. Unlike Fisher, we are not primarily concerned with specific events at all, but with the

contexts in which events occur, with how particular social and cultural systems work, and how easy it is for them to change, and in what directions. Given that domesticable plants and animals existed, then agriculture was bound to develop somewhere and so, too were the state, international trade, cities, literate civilisation, and even world religions of some kind, ‘bound to’ meaning that the probabilities were overwhelmingly large. The whole emphasis is therefore on different kinds of social organization and systems of ideas, and their potential for change in some directions rather than others, and not on particular people or events. The exact where, when, how, and by whom of all this was, of course, a matter of historical accident, but in spite of all the accidents and unique events and personalities of history, there are also fundamental constraints that can produce basically similar results, such as the structure of the state in China, India, Europe, and the Americas that I mentioned earlier.

Evolutionary convergence of this kind is a genuine problem that historians like Fisher have simply ignored. It is rather like the game of Monopoly: the players are all different and the throws of the dice produce a completely different game each time, yet the underlying constraints produce essentially the same result – a single player who owns everything and has driven all the others into bankruptcy. This is a good illustration that unique events, even randomness, and free will, are quite compatible with broadly predictable outcomes.

But whereas every game of Monopoly ends with one player owning everything, and while on the world stage it was (probabilistically) inevitable that the state would emerge, of course not all societies must inevitably develop the state. Far from it: as we saw, the majority of tribal societies had features that made it difficult or impossible for them to become states. The ‘historical inevitability’ of social evolution is simply the result, then, of the probabilities that different social and cultural conditions will come into being, and their potential for making certain further types of change more or less likely. It does not in any way contradict the obvious facts of our free will, or that great men and major events, the accidental and the unforeseen, have played essential parts in the actual history of mankind.

Notes

1. There is no doubt that these cognitive capacities and behavioural dispositions that I have called ‘innate’ have themselves been constructed in the course of evolution, but since we have no idea how this may have occurred we have no alternative but to take them simply as given. The many attempts by

evolutionary psychologists to explain this process (e.g. Barkow, Cosmides, and Tooby 1992) have basically been failures for the very simple reason that it is not possible to give adaptive explanations for the evolution of various human abilities when we know virtually nothing about our remote ancestors' mode of life in East Africa during the Pleistocene (see Hallpike 2011:214-55).

2. Professor Bruce Trigger, personal communication.

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