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The homogenisation of diversity: Processes selecting for biocultural generalism in the Anthropocene

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ABSTRACT: This paper is an experiment in applying an evolutionary perspective to the semiotic selection processes inherent in modernity, globalisation, and capitalism. The ongoing global loss of biological diversity is not only paralleled by the loss of cultural and linguistic diversity, but also related to it in complex ways. The social condition of modernity promotes cultural homogenisation as unremittingly as capitalism promotes biological monocultures. However, whereas globalising capitalism has also encouraged the spread of biological generalists such as rats and dandelions, the homogenisation of cultural values and worldviews has progressed in tandem with an ecological specialisation of the human species, increasingly reliant on a handful of domesticants. Modern humans can thus be characterised as cultural generalists but biological specialists. Cultural selection processes in modern societies inexorably benefit the ideas, artifacts, and personalities that are least dependent on context, whereas the ecological niche of modern humans is alarmingly narrow and specific. Following Eriksen's example in applying Hoffmeyer's concept of 'semiotic freedom,' we must conclude that, for most of the world's population, modernisation and globalisation have meant a loss of complexity, freedom, skills, and semiotic depth. The propensity toward abstraction and decontextualisation that is fundamental to modernity is epitomised in the artifact of all-purpose money, which promotes and mystifies global social asymmetries. The peculiar semiotic properties of the money artifact continue to undermine both the cultural and biological diversity of the biosphere from which it emerged.

Keywords: cultural selection, semiotic freedom, modernity, decontextualisation, all-purpose-money, evolution, diversity, generalism, specialisation, homogenisation

Introduction

In this article, I will discuss the relation between processes of biological and cultural homogenisation under globalised capitalism. The discussion is very much a response to Thomas Hylland Eriksen's (2021) stimulating essay on 'The Loss of Diversity in the Anthropocene: Biological and Cultural Dimensions,' published last year in *Frontiers in Political Science*. Eriksen follows Charles Mann (2011) and others in observing that modernity and economic globalisation are detrimental to both biological and cultural diversity. Indeed, the extinction of species and the extinction of languages are equally apparent and alarming. In promoting agricultural as well as mental monocultures, the logic of globalised capitalism appears to lead to both ecological and cultural homogenisation. However, whereas the loss of biological diversity is widely recognised as an incontrovertible and undesirable development, the loss of cultural diversity is frequently contested or, even when accepted as a fact, viewed

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as something that we have no reason to deplore.

Some would argue that transnational communication and migration generate new forms of diversity, but this begs the question what we mean by 'diversity.' Eriksen is clearly right to observe that there is now "a shared global grammar for the effective expression of uniqueness," that people are prone to "attune themselves to a transcultural conversation about cultural difference," and that "it remains indisputable that the new diversity is *different* from the old." Most anthropologists working in the field will have reflected over how some individuals are more easily approached than others, in part because they are more comfortable with conversations about the particularities of their reified 'culture' or 'tradition' – in short, more modern. Of course, what people refer to as their 'culture' or 'tradition' is undeniably transformed by being experienced as such. Few anthropologists alive today have experienced the kind of incomprehensible encounters described by Lévi-Strauss (1955) in *Tristes Tropiques*, with indigenous people with whom no communication was possible. On viewing recent video recordings of previously uncontacted indigenous people in Amazonia, we can perhaps imagine how profound such incommensurability could be. In his book *The World Until Yesterday*, Jared Diamond (2012) has published a 1933 photograph of a New Guinea Highlander who "weeps in terror at his first sight of a European." Of course, nobody is suggesting that this kind of 'diversity' is something to feel nostalgic about, but the point here is not about evaluating degrees of cultural difference, merely to establish analytically that cultural diversity is not what it used to be – that something significant has been transforming the phenomenon that we refer to as 'cultural diversity.' One of the things that globalisation has taught people all over the world is to cognitively detach themselves from the specificity of their experience and to think about it – to objectify it – in terms of culture. To acknowledge this shift is intended not as a normative but as an analytical observation.

If the new diversity is different from the old, as Eriksen observes, we need to understand how and why. The modern categories of 'culture' and 'tradition' clearly exemplify what Anthony Giddens and other sociologists refer to as self-reflexivity. They are simultaneously examples of conceptual abstraction. To abstract is to decontextualise – to eliminate the particulars. To use abstract language is thus structurally related to the 'disembedding mechanisms' that Giddens (1990) identifies as diagnostic of the social condition of modernity. A central disembedding mechanism, says Giddens, is money, which – like other symbolic tokens – "can be 'passed around' without regard to the specific characteristics of individuals or groups that handle them…" (Giddens 1990: 22). At the core of the modern condition, it seems, is an inclination to transcend specific contexts in favour of the general, whether in terms of how we think and talk, how we exchange things, or how we relate to people and places. Historians such as Richard Seaford (2004) have traced this inclination to the appearance of coined money in ancient Greece. Sociologists have emphasised that it became pervasive much later, with 19th century modernity. From the perspective of the average person, it meant that a premodern attachment to specific things, people, and places was widely superseded by more abstract reference-points in the form of *categories* of things, people, and places. By and large, specificity and uniqueness gave way to increasing standardisation and generalised interchangeability.

While painting history in such broad brushstrokes may raise objections among many anthropologists, the general tendency over the past three centuries toward more abstraction, commodification, and mobility seems incontrovertible. There have been countless

observations on this modern logic, from 19th century Romantic poets, through classical sociologists such as Max Weber and Georg Simmel, to more recent perspectives such as George Ritzer's (1993) concept of 'McDonaldization.' To many observers, the growing global convergences can be traced to the expansion of 'Western' dominance. In his bestseller *Sapiens: A Brief History of Humankind*, Yuval Noah Harari asserts that:

> [t]oday all humans are, to a much greater extent than they usually want to admit, European in dress, thought and taste. They may be fiercely anti-European in their rhetoric, but almost everyone on the planet views politics, medicine, war and economics through European eyes... Even today's burgeoning Chinese economy, which may soon regain its global primacy, is built on a European model of production and finance. (Harari 2011: 313)

Indeed, modern rationality has historically been promoted by the expansion of Euro-American power since the 19th century, but its global logic is not geographically defined but transcultural and transhistorical. It is propelled by the artifact of general-purpose money and the concomitant 'idea of the self-regulating market,' as Karl Polanyi (1944) called it, which accompanied and buttressed that expansion. What we think of as modern capitalism is the aggregate logic generated by general-purpose money, which induces people to pursue the best deals they can on the world market, exchanging their labour time for products representing as low-wage labour and as lax environmental legislation as possible. If artifacts have agency, money is the paradigmatic example. In making everything exchangeable, it focuses our attention on considerations of market price, which in turn inexorably increases global inequalities and environmental degradation.

Eriksen has asked us to consider what the relation is between cultural and biological homogenisation – between the loss of cultural diversity and the loss of biological diversity. Given fairly stable conditions, the diversity of species in an ecosystem tends to increase, as new, specialised niches are continuously generated through competition within populations and interaction between species. When conditions are severely disrupted, however, specialisation is a disadvantage and generalists are more likely to survive. The radical environmental changes resulting from global capitalism over the past few centuries have led to the extinction of countless species, only a fraction of which have been recorded. Throughout the world, they have been supplanted by generalist species such as rats and dandelions, which seem to thrive almost anywhere. This process is indeed analogous to the disappearance of languages and other locally shared, integrated systems of meaning. We might use Richard Dawkins' (1976) concept of 'memes' as the cultural counterpart of genes and suggest that generalist memes such as cheeseburgers and milkshakes tend to displace intricately designed ones, such as Japanese tea ceremonies or traditional manioc processing in the Amazon. In this general sense, the reduction of both biological and cultural diversity can be derived from capitalism. To analytically identify the parallels between these two processes, however, we shall follow Eriksen's (2011) suggestion and apply the conceptual tools of semiotics, which have the merit of transcending the domains conventionally classified as 'nature' versus 'society.'

As Ernst Gellner (1983, cited by Eriksen 2021) proposed, the new kind of diversity produced by modernity evokes the concept of 'entropy' rather than organised patterns of differences. Given that culture is a socially negotiated and to some extent collectively shared

system of meaning, the disembedding mechanisms of modernity indeed suggest the very antithesis of such shared meanings. The individualised, modern 'diversity' invoked by many recent culture theorists is a phenomenon more appropriately studied by psychologists than by anthropologists.

We can probe deeper into the mechanisms through which the memes associated with modernity are being selected for in globalisation. Processes of selection are common to the survival of both genes and memes. In its most elementary form, the Darwinian theory of natural selection has been criticised for being tautological. If restricted to the observation that those individuals who are best equipped to survive are most likely to survive, the theory does not provide much of an explanation. But when complemented with information on genetic variation and selective pressures, the simple algorithm of natural selection can indeed help to explain why species evolve and in which direction. Gregory Bateson (1972), who was both an anthropologist and a biologist, proposed that an explanation is a description mapped onto a tautology. By way of illustration, the tautological assertion that the 'fittest' will survive assumes great relevance when applied to an ancient population of proto-giraffes with genetically varying neck-length on a drought-afflicted savanna. It helps to explain why genes for increasingly longer necks became more and more common among the ancestors of modern giraffes.

Perhaps, then, tautologies do not deserve their poor reputation. After all, they *are* always true. Indeed, those individuals who are best equipped to survive are most likely to survive. Having seen how they help explain selective processes in nature, we can ask how they might help explain such processes in society. Are cultural memes as exposed to selective pressures as genes? To begin answering the question, we need to consider the well-established anthropological insight that cultural phenomena – anything that conveys meanings – are always dependent on *context*. This is as evident from phonemes to myths. But then, how shall we understand the inclination, in modernity, toward disembedding – that is, *de*contextualisation? In modern society, ideas, commodities, and people tend to be mobile, often moving great distances. In other words, they are expected to shift contexts. Modern money organises continuous exchanges of goods and services, regardless of context. Similarly, modern science and other expert knowledge is designed to be universally applicable, again regardless of context. Finally, even the modern person complies with the same pattern: she is designed to offer her services regardless of context, disembedded from kin and place, at home everywhere and nowhere, versed in the art of socialising with strangers. The fundamental logic of modernity should thus be that *the ideas, artifacts, and personalities that gain the widest distribution are those that are least dependent on context*. We can now posit an algorithm and a selective pressure that is as fundamental to the trajectory of modern society as natural selection is for biological evolution. While the explanation of evolution accepted by biologists includes a tautological reference to the 'survival of the fittest,' we can suggest that *cultural* selection in processes of modernisation can be represented in terms of the tautological insight that 'that which is most likely to spread is what spreads' (Hornborg 2011). The ideas, objects, and persons that are most easily moved from one context to another can be expected to be favoured by the logic of cultural diffusion. We are more likely to encounter cheeseburgers – and the people who eat them – than Japanese tea ceremonies.

Referring to Jesper Hoffmeyer, Eriksen suggests that the long evolutionary movement of life on Earth toward more biological complexity can be understood as an increase in

'semiotic freedom,' which Hoffmeyer defines as "the *depth of meaning* an individual or a species is capable of communicating" (Hoffmeyer 2005: 222; emphasis added). Hoffmeyer explains that this concept of 'freedom' refers to freedom from being determined by the constraints of natural laws. He exemplifies by comparing a microorganism's capacity to detect molecules of nutrients in its immediate environment, on the one hand, with a bird pretending to have a broken wing in order to distract a fox from its nest, on the other. Both are examples of communication, widely defined, but the difference in terms of 'depth of meaning' is enormous. The behaviour of the bird is a very specific and seemingly arbitrary mode of communication in the sense that it cannot be derived from biochemical or other natural laws. Hoffmeyer proposes that the biological evolution of complexity should be understood in semiotic, rather than morphological, terms. Citing the palaeontologist George Simpson, he concedes that humans are not more morphologically complex than ancient species of fish living four hundred million years ago, while human speech is immensely more complex – in terms of semiotic depth – than any other mode of communication that has emerged in the history of life on Earth. Persuaded by Hoffmeyer's approach, which urges us to rethink human language and culture in an evolutionary context, Eriksen proposes that the homogenising effects of globalisation suggest that this development toward greater complexity is now being reversed. Here I would like to quote Eriksen at length:

> Thousands of mutually unintelligible languages, unique religions and customs, kinship systems, cosmologies and economic practices produced a world of a fast-growing number of differences. What seems to be happening today as a result of frantic human activity across the planet is nevertheless a reduction in semiotic freedom, a loss of flexibility and options. This seems to be the case both with respect to the nonhuman world and that of culture and society. (Eriksen 2021)

The pervasive loss of indigenous languages, traditional ecological knowledges, and crafts – and their replacement with standardised outlooks and practices geared to modern technology – is nothing less than a systematic *deskilling* of most of humanity. We should recall that the much celebrated technical, scientific, and artistic expertise of modern society is reserved for a small minority of its population, while its overwhelming majority is compelled to perform tasks that are very rarely conducive to creativity. Semiotic freedom, in other words, is a matter of highly uneven global distribution. Moreover, whatever expertise is encouraged in modernity tends to be dependent on advanced technologies, which means that it is defined by those technologies rather than by the inherent skill of a human being. The outlook and worldview of modern people will thus tend to be permeated by the abstract rationality of technology, which might seem unobjectionable if it were not for the fact that access to modern technology is contingent on the abysmally uneven distribution of purchasing-power – or money, for short. It is not a coincidence that the *absence* of money and advanced technology is central to the concept of 'indigenous people': Marshall Sahlins observed that indigenous societies almost always contrast their own cultures to "the white man's 'living in the way of money.'" (Graeber and Wengrow 2021: 58) If anthropological sympathies for 'the indigenous' seem nostalgic and dystopian, it is because anthropology, as a profession, has learned to view modern society from the outside – from the perspective of the *non*modern.

We can further explore this evolutionary perspective on globalising modernity by

considering the relation between Hoffmeyer's concept of 'semiotic freedom' and what the biologists call 'generalism.' Although at first sight equivalent, because both concepts suggest flexibility, semiotic freedom and biological generalism are different parameters. If semiotic freedom is a measure of the complexity of meaning that is communicated, it may well be associated with specialisation, rather than generalism, if viewed from the perspective of an individual or population. Conversely, as well understood by epidemiologists, semiotically very simple microorganisms tend to be biological generalists. As mentioned, under fairly stable ecological conditions, competition generates a tendency toward specialism, but when conditions rapidly change, generalists have an advantage (Dennis et al. 2011). Highly specialised, endemic species are attuned to unique sensory stimuli requiring sensitivity to very specific kinds of information regarding their ecological niche. The connection between semiotic and ecological specialisation was established long ago by the Estonian zoologist Jakob von Uexküll through his concept of *Umwelt* (Uexküll [1940] 1982). This tendency toward specialisation is what has generated the intricate complexity of rainforest ecosystems, for instance, but it is also what makes specialised species so vulnerable to extinction, while generalists like rats and dandelions are able to survive major changes in ecosystems. Neither rats nor dandelions are dependent on specific and complex semiotic contexts. This not only makes them into survivors, but also into successful colonisers.

If we apply these perspectives to cultural processes, we discover that the relation between specialism and generalism is paradoxical and not as clearly geared to ecological viability as in biological processes. To begin with, the unique semiotic freedom with which humans are equipped – through their capacity for language and culture – has made us into a generalist species, in the sense that we have been able to adapt to a great diversity of ecological settings from deserts and tropical rainforests to high mountains and the frozen Arctic. In this sense, semiotic freedom has indeed meant flexibility, from a species perspective. But from the perspective of individual human groups, it has encouraged specialisation, vulnerability, and a *loss* of flexibility. By and large, cultural diversity increased over hundreds of thousands of years, up until the turn toward modern homogenisation that Charles Mann dates to the 16th century. The rapid reduction of cultural diversity over the past few centuries has in part been a response to biological processes such as epidemics and environmental change in the form of deforestation, monocultures, and loss of biodiversity, but the primary impetus underlying all these processes has derived from a globalising social system pursuing the logic of general-purpose money.

Money is a peculiar semiotic phenomenon. Unlike all the other kinds of signs discussed by Hoffmeyer – whether bird song, animal scent, or human words – money is a sign without a referent. It can mean whatever its owner wants it to signify. In this sense, it is certainly a source of freedom and flexibility, but it can hardly be seen as a means of communicating, to use Hoffmeyer's expression, a greater 'depth of meanings.' All other semiotic codes are composed of several characters, like the letters of the alphabet or the nucleotides of a DNA molecule, which generate meanings by being variously combined. Money is unique in having *one* single character. It thus cannot communicate meaning. Given how pivotal the logic of money is to modernity, globalisation, and the loss of diversity, it is puzzling to find the field of semiotics largely uninterested in the semiotics of money. It is paradoxical that the unique symbolic capacity of the human species, which has granted it unprecedented levels of semiotic freedom, has finally yielded a sign that is so devoid of meaning that it systematically

undermines both the cultural and the biological diversity of the biosphere from which it emerged. It is as if money represents a threshold, where the evolutionary increase in semiotic freedom reaches a point at which it is reversed. As has often been observed, for instance by Ivan Illich (2013), it represents a threshold also in other, related ways, by turning efficiency into *in*efficiency and rationality into *ir*rationality.

Although this is not the space to elaborate the argument, it will suffice to say that a semiotic understanding of the cultural and biological repercussions of general-purpose money would be essential for any attempt to *redesign* money – that is, gaining mastery over the fetishised artifact that has become our master. I know it sounds ridiculously utopian, but in the long run it appears to be the only possible way of safeguarding our semiotic freedom (Hornborg 2019).

We must finally reflect on the crucial difference between biological and cultural generalism in terms of how they relate to material metabolism. Biological generalism increases the chances of physical survival under conditions of sudden ecological disruption. It is a strategy for enhancing the range of energy sources accessible to a species. But human malleability – our biological capacity for cultural diversity – has different implications depending on the level at which it is considered. At the level of the species, as we have observed, it has favoured a generalist colonisation of a wide range of ecosystems, but at the level of particular populations culturally attuned to specific contexts and livelihoods, it has until historically recent times promoted specialisation. To the extent that such cultural specialisation has implied vulnerability to rapid change, this is only in part a consequence of physical environmental disturbance. The loss of cultural diversity under the influence of globalised modernity has not so much been a matter of human populations failing to survive a competition for physical resources as of the socially organised dissolution of their systems of meaning. This is the essence of the existential Holocaust propelled by the expansion of capitalist modernity.

The transition to modernity can be viewed as a shift to cultural generalism in the sense that human outlooks are no longer as geared to specific contexts. In Hoffmeyer's terms, we have become semiotically shallower. In terms of material metabolism, for the global majority, modernity has actually narrowed the range of ecological resources. Modern people tend to derive most of their energy from a mere handful of industrially grown cereals, root crops, and species of livestock – a few domesticated strains of plants and animals that will thrive regardless of context. Paradoxically, then, our cultural generalism has favoured an increasing ecological specialism. This is a crucial difference between cultural and biological generalism – between modern customers at McDonald's and the flexibility of omnivores such as rats. The dependence of most of humanity on the narrow ecological niche of fossil-fuelled, monocultural food production has not only increased our own vulnerability but simultaneously radically reduced biological diversity.

Although affluent consumers in the Global North will object that their culinary diversity is vastly greater than that of their premodern ancestors, we should again remind ourselves that this capacity to access edibles from all over the planet is contingent on their privileged purchasing power, whereas most people in the world have no choice but to resort to a very restricted selection of foodstuffs. More significant, from an evolutionary perspective, is that very few people have retained the skills and know-how required to derive their nourishment from the landscapes that they inhabit.

For two centuries, proponents of modern development have asserted that indigenous, nonmodern people represent cultural idiosyncrasies that must succumb to the progress of modernisation, in part because they are inflexible – much as highly specialised biological species may become vulnerable to extinction. However, if for some (of many possible) reasons our global food system should fail, the tables would be turned – and the inflexibility of modern civilisation would become disastrously evident. In having become completely dependent on the industrially produced groceries that we can purchase in supermarkets, most of us are entirely incompetent at deriving our subsistence from the natural environment.

Given that supermarkets have become our ecological niche, consumer behaviour can be understood as a form of specialised foraging. It is specialised because it relies on a very complex, and increasingly fragile, global system of provisioning. It is noteworthy that the concept of 'consumption,' regardless of the type of commodity, is metaphorically based on eating. Much of what I have said so far is clearly illustrated by McDonald's fast-food restaurants. What Ritzer called 'McDonaldization' is literally about eating. Wherever we are in the world, we can have the same cheeseburger. Such globalised food habits require very little in terms of semiotic context, but they inexorably diminish both biological and cultural diversity. Most disturbingly, they have made us so dependent – so specialised in our reliance on industrial food production – that many people would be at a loss without it. The spectre of a global breakdown evokes the horrors of Cormac McCarthy's dystopic novel *The Road*; the novel depicts a post-apocalyptic world in which humans resort to cannibalism. After all, it has been estimated that out of the total global biomass of terrestrial vertebrates, a stunning 36 per cent now consists of human bodies (Bar-On et al. 2018). Cannibalism would be the logical endpoint of a trajectory toward *zero* 'semiotic freedom.'

There have been efforts to formulate rigorous paradigms for biocultural theory, focusing on the coevolution of genes and culture. Such efforts risk pitfalls such as projecting gene-culture coevolution in early prehistoric humans into the recent millennia of 'anatomically modern humans,' which is to deny the overwhelming autonomy of culture vis-à-vis biology. There are limits to the analogy between biological and cultural homogenisation, but as Eriksen has recognised, there are formal correspondences – and even causal connections – between them that can be understood in terms of semiotics. The common denominator that links biology and culture is indeed the evolution of communication. The disembedding mechanisms of modernity – such as money, abstraction, and mobility – have selected for both the genes and the memes that are least dependent on context. Rats, dandelions, and modern people are comparatively free to shift between different contexts, but from the perspective of Hoffmeyer's definition, they do not represent an increase in *semiotic* freedom. It is thus paradoxical that modernity, which tends to be celebrated as a condition of freedom from place and tradition, can simultaneously be understood as a *loss* of 'semiotic freedom.'

Many anthropologists no doubt continue to feel a fundamental ambivalence about modernity. It is difficult to deny the attraction of homogenising modern values such as democracy, non-violence, freedom of speech, and human rights, but neither can we deny that modernity over the past two centuries has brought humanity autocracy, violence, and repression at unprecedented scales. The enduring question that this symposium raises is whether the widespread material benefits of modernity tend to obscure its distributive as well as existential deficits. The special sensibility of anthropologists to local, indigenous systems of meaning compels us to acknowledge that the loss of cultural diversity is as draining

and possibly damaging as the loss of biological diversity. I very much appreciate that the recipient of this year's Vega medal has perpetuated, rather than dismissed, this perennial concern of anthropology.

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