Cultural Evolution

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1. INTRODUCTION

When *The Origin of Species* got published in 1859 it completely changed biology and most sciences which study the development of any forms of life. Darwin's theory of evolution by *natural selection* marked a turning point in the way we understood the world, ourselves and our origins.

According to his theory, natural selection is a process which occurs when those organisms which are better adapted to the environment surrounding them reproduce more and have a higher probability of survival. With time, this process results in favourable traits becoming more common in a given population as they are generationally inherited. (Okasha, 2002, 9-10) For example, giraffes evolved from animals which were similar to deer. Their ancestors' necks weren't elongated. However, since they lived surrounded by very tall trees, those specimens which had a bit longer necks had a feeding advantage. These individuals reproduced more, transferring this favourable trait to their descendants. This process continually happening over many years produced the anatomy of giraffes as we know them today. (Marshall, n.d.)

Darwin's theory had a significant impact on research conducted in various scientific fields. One of those fields was anthropology which was working on understanding *human culture*. So, the *cultural evolutionary theory* was developed. As culture is a really complex notion, a lot of researchers are eager to explicate it. There are many ways to approach the study of culture. Cultural evolutionary theories to the biggest extent deal with explaining how culture developed and how it is transferred.

In this thesis, my objective is to introduce the basics of the discussion on cultural evolutionary theories. I chose this objective because I think that this field has a lot of potential to advance our understanding of culture. However, I found the discussion quite confusing and difficult to follow so I will attempt to clearly present the views of a few different cultural evolutionists, focusing on those ideas which I find to be the most interesting, hoping to offer a simple introduction into the field.

To accomplish that, first I will ask what exactly culture is. Defining culture is a problematic task because it is such an intricate notion. Then I will shift focus to the way in which cultural

evolutionists understand culture. I will do that by presenting different cultural evolutionists' conceptions of culture as information and pointing out the main weaknesses of the given arguments. Next, I will offer a general explanation of cultural evolutionary theories - a domain of cultural studies which tries to establish an evolutionary account of the spread and the development of culture. Following, I will introduce two specific cultural evolutionary theories. First, *the historical approach* to cultural evolution - an extremely permissive account of cultural change as gradual historical process. Second, *cultural selectionism* - a theory which proposes the view that the processes of cultural development and spread are parallel to those of organic evolution mostly because both are subject to natural selection. After that I will discuss a subfield of cultural selectionism - *the meme theory*. This theory is a more extreme version of cultural selectionism. It puts forward the view that for culture to spread and evolve, it requires both the impact of natural selection and the existence of *replicators* by which it is reproduced. Finally, I will offer my conclusion about cultural evolutionary theories.

2. WHAT IS CULTURE?

The Merriam-Webster Dictionary defines culture as "the characteristic features of everyday existence, such as the customary beliefs, social forms, and material traits, shared by a particular group of people at a particular point in time." (Merriam-Webster, n.d.) In other words, culture is an umbrella term which encompasses the entire social heritage, both the material and the immaterial aspects of it, which is transmitted and received through social learning within a certain population.

As the term is very broad and ambiguous, most attempts to explicitly define it result in an open-ended list of all the phenomena it is comprised of. Despite not being able to offer an unambiguous definition, explanations like these help us better understand what the term implies. Such description of culture was put forward by Edward Tylor who states:

> Culture or civilization, taken in its wide ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society. (Tylor, 1871, 1)

So, Tylor believes that culture is a product of human activity. A distinctly human trait which has been one of the main driving forces behind human development. Not everyone agrees with this statement claiming that there are many animal species which display socially transmitted patterns of behaviour[1], take for example, male specimens of the bird of paradise have developed a specific dance to court the females in attempt to get them to mate with them[2]. However, according to Clearance M. Case's article *Culture as a Distinctive Human Trait*, Tylor's claim is based not only on existence of socially transmitted behaviour but also on the fact that in human populations that knowledge accumulates and that does not seem to be the case with the animal species. (Case, 1927, 906-908)

The term culture developed from the Latin word *colere* which means to cultivate and tend to something. (Online Etymology Dictionary, n.d.)[3] According to Richard Velkley, in *Being after*

[1] See Hornell and Pantzer (1925) for more information.
[2] See National Geographic (n.d.) *New Bird of Paradise Species Has Smooth Dance Moves* at https://www.nationalgeographic.com/animals/article/new-species-birds-of-paradise-animals-spd for more information.
[3] See Yúdice (2007) for more information.

Rousseau: Philosophy and Culture in Question, the first use of this term which transcends its original agricultural meaning is credited to the prominent Roman orator Cicero. He used the term metaphorically, creating an analogy between the agricultural cultivation and the cultivation of the soul, which he named “cultura animi”, with the goal of showing that philosophy has the ability to evolve the soul. (Velkley, 2002, 15)

In the seventeenth century, Samuel Pufendorf takes the Ciceronian conception of culture and reshapes it to fit his own ideas. Velkley states that instead of using the term to denote how philosophical education unlocks the natural potential of the soul, Pufendorf uses it to “refer to all the ways in which human beings overcome their original barbarism, and through artifice, become fully human." (Velkley, 2002, 15) Thus, Pufendorf establishes the modern understanding of culture as the sum of the accumulated knowledge, ideas, values, institutions and practices that make up and improve the life of a certain society.

The unifying characteristic of Cicero’s and Pufendorf’s conceptions of culture is that they see it as a promoter of change and development. However, culture is not only an agent of change but also subject to it. It changes according to the requirements of the population.

To conclude, culture is, in a way, a depository of knowledge on how to maximise the success of a given civilisation. Humans use it to quickly and efficiently adapt to the changing environment surrounding them. For that reason, culture needs to constantly evolve too keep up with the demands of the increasingly complex societies. This is possible because it is learned and it accumulates which makes it very adaptive.

In the following section, I will present the conception of culture as information which is supported by most cultural evolutionists. It is important to see how they understand culture because it is the basis of their conception of cultural evolution. Once again, it will be noticeable how difficult it is to define a term like culture. Despite that fact, the explanations that are offered, however faulty, are helpful for the research of the reproduction of culture.

2.1. CULTURE IS INFORMATION

Cultural evolutionists are much more interested in the means by which culture has been shaped and transmitted. Consequently, the definitions of culture which they offer are not that

detailed. Once again, they vary depending on the overall perspective of the cultural evolutionist who formed them. However, most advocate the view of culture as information without really offering sufficient explanations on what that conception entails.

In his book *Cultural Evolution: Conceptual challenges* Tim Lewens assesses four major cultural evolutionist explanations of *cultural information* and concludes that they are all problematic in their own ways. (Lewens, 2015, 45)

First, Richerson and Boyd claim that cultural information includes any and all mental states which are created and spread by social learning and which have the ability to influence the behaviours of individuals within the given society. This argument is rebutted by use of their own example which assumes the existence of cultural information within material objects. According to them, at least some of the information required for creating traditional pots, like the structure of the pot and its design, is stored on pots themselves.[4] (Richerson and Boyd, 2005, 5-61) Thus, if we accept the claim that material objects have the ability to store cultural information, then we also must accept that cultural information cannot be defined only as mental states.

Despite the faulty nature of their definition, the idea that cultural information could be stored in material objects sets an intriguing question on how far could cultural information extend? If we accept the claim that pots contain specific cultural information on how pots should be made, it logically follows that cows hold information on how they should be milked. This idea emphasizes the difficulty of determining the sufficient reasons for something to be considered cultural information. How could we establish which entities contain it and in what amount? Lewens leaves this problem unresolved, claiming that it cannot be sorted out until we understand the nature of information found in material objects. (Lewens, 2015, 46)

Second, we look at another definition offered by Boyd and Richerson in their earlier work in which they state that cultural information is all that "which has the property that energetically minor causes have energetically major effects." (Boyd and Richerson, 1985, 35) They use the example of DNA to instantiate this claim because it controls major features of the metabolism despite it being only a small part of its biomass. (Boyd and Richerson, 1985, 35)

[4] However, they also state that information which can be stored this way, without use of languge or some type of symbols, is limited. For example, one cannot learn how to use fire to shape a pot just by looking at it. (Richerson and Boyd, 2005, 61)

This definition is rejected based on the fact that there are enough examples where there is an obvious transfer of information but the energetic transmission is reverse, in other words, energetically major causes have energetically minor effects. One such example would be the research being done on solar flares. In this instance, an instrument used for conducting the research displays the information it measured about the impact of solar flares. Solar flares are an energetically major cause but their effect on the measuring instrument is energetically minor. (Lewens, 2015, 47)

Third, Hodgson and Knudsen attempt to create an interdisciplinary, generalised version of Darwinism that could be successfully applied to most evolutionary fields. Similar to cultural selectionists, who I will discuss in more detail in Section 3.2. (of this paper), they argue that certain replicators exist which are the main carriers of information in any evolutionary domain, including that of cultural evolution. So, these replicators are carriers of cultural information.

To evaluate the informational content of a replicator we have to compare it to that of the corresponding ideal replicator. (Lewens, 2015, 48) To quote Lewens who explains it well:

> The actual environment of an actual replicator specifies an ideal template for an optimal replicator, and any actual replicator is rich in information to the degree that it conforms to that optimal replicator. (Lewens, 2015, 48)

This approach complicates the process of evaluating cultural information even more because it requires us to determine the "optimal" specifications for a replicator before we even begin analysing the existing one. This task seems impossible and what's more Hodgson and Knudsen do not offer any guidelines on how exactly we are supposed to carry it out which is reason enough to disregard this theory. (Lewens, 2015, 49)

Fourth, Mesoudi's and Ramsey's conceptions of cultural information are based on attempts to avoid circular argumentation. Mesoudi does not offer a precise definition of cultural information, instead he produces an open-ended list, as we have seen cultural anthropologists do in the previous chapter, of all the phenomena which fall under that category. He mostly counts the same phenomena we have mentioned before and is very permissive in his account of what counts as cultural information. However, same as Ramsey, he draws the line at behaviour. Both cultural

evolutionists are adamant that behaviour cannot be considered cultural information. (Mesoudi, 2011, 2-4; Ramsey, 2013, 460-461)

Ramsey substantiates this argument by stating: "if culture is behaviour, then culture cannot cause or explain behaviour." (Ramsey, 2013, 460) Mesoudi completely agrees, using the exact same argument in his work, adding that: "A thing cannot explain itself, at least not in any useful sense." (Mesoudi, 2011, 4) After rejecting the view that culture is behaviour, they add that it should rather be understood as information which affects and "governs" behaviour.[5] (Mesoudi, 2011, 3; Ramsey, 2013, 460)

While at first this claim may seem successful in doing what it sought out to do, it also means that those who support it also must support the claim that, for the same reason, knowledge and skills cannot be considered cultural information. (Lewens, 2015, 49) This seems drastic and Lewens agrees arguing that:

> the problem of circularity detected by Ramsey and Mesoudi is really no problem at all: even if 'culture' names a variety of cognitive and behavioural states, culture can still explain such states on the grounds that the cognitive and behavioural endowments of one generation (i.e. its culture) can contribute to the production of similar cognitive and behavioural endowments in a later generation. This is precisely the reproductive role that cultural evolutionists believe can be mediated by, among other things, social learning. (Lewens, 2015, 49-50)

As we have seen, cultural evolutionist's endeavours to create a universal definition of cultural information leave much to be desired. While their general ideas might not be wrong, the definitions they offer have obvious weaknesses which cannot be ignored. Moreover, according to Lewens cultural evolutionists should not turn to philosophers expecting to find an accurate, unambiguous definition of cultural information because their explanations are also faulty. (Lewens, 2015, 49-55) This thought is further emphasized by the fact that his own attempt at a solution is flawed. First he argues that:

[5] See Geertz (1973) for more information.

> The notion is best understood as an open-ended heuristic prompt which encourages an examination of the ways in which bodies of behaviours, skills, beliefs, preferences, and norms are reproduced from one generation to the next. (Lewens, 2015, 45)

And then, in chapter nine of *Cultural Evolution: Conceptual Challenges*, he adds that emotional states, which he does not mention in his definition, should also be considered cultural information. (Lewens, 2015, 172)

All in all, the perceived inability to offer a precise and comprehensive conceptualisation of cultural information does not negate its value for the cultural evolutionary theory. Just like the anthropological concept of culture presented in the last chapter, cultural information is an umbrella term for a variety of different phenomena which are transmitted by learning and affect the way of life of a certain population. The broad idea of the term is useful enough to utilise it in the search for answers to more pertinent questions plaguing the cultural evolutionary theory.

Now, after gaining the important background information, I will explain what cultural evolutionary theories are. As we have seen, cultural evolutionists understand culture as information. How exactly is this cultural information produced and replicated? Where is it stored? What makes it possible for it to evolve? In the next section, I am going to present some attempts to find answers to these questions.

3. CULTURAL EVOLUTIONARY THEORIES

The main objective of cultural evolutionary theories is to provide a coherent overview of the phylogenesis of human culture. In other words, cultural evolutionists are trying to develop an evolutionary-based theory of cultural change. To do that, they must attempt to answer a wide range of important questions. What led to the creation of culture? Why do humans even have the ability to participate in culture? How exactly does it spread? What are the determining factors of which cultural phenomena are going to remain and which are going to die out? What is the reason for the emergence of so many different cultures? What are the universal traits all cultures share, if there even are any? What are the main mechanisms for the development of culture? (Durham, 2003, 190) These are only some of the questions that cultural evolutionists are trying to find answers to.

The cornerstone of cultural evolutionary theories is the belief that cultural change is Darwinian in its nature. That is to say, cultural change is an evolutionary process that in many aspects resembles organic evolution. It is affected by the same three phenomena which are thought to be the basis of genetic evolution - variation, selection and heritability. However, there are some key differences in the mechanisms by which these phenomena affect culture.

Cultural evolutionists use many of the same methods as biologists to examine these distinctions and explain the complex cultural systems. Amongst these are the phylogenetic methods used to discover the interconnections between different cultural traits, experiments for testing the details of microevolution (like cognitive biases or preferential learning), ethnographic field studies which document the variation across cultures and mathematical models which are used for the analysis of the impact of microevolutionary processes on culture as a whole. (Mesoudi, 2011, 1)

There is a number of different ways to take an evolutionary approach to cultural change. In this thesis I will first present the historical approach to cultural evolution as a broad framework from which all other cultural evolutionary theories developed. Afterwards, I will focus on cultural selectionism, as one of the most discussed theories within the discourse on cultural evolution.

3.1. THE HISTORICAL APPROACH

Essentially, the historical approach to cultural evolution states that, as time goes by, culture gradually[6] changes. Those who advocate for this approach aim to understand how different forces have influenced culture to change from its former states into what it is now. To simply put it, modern cultures are a derivation of the cultural systems preceding it. Alfred L. Kroeber clearly explains this idea of the "tree of culture" in his work *A Roster of Civilizations and Culture* saying that: "The many past and present cultures grade into one another in space and time in a vast continuum." (Kroeber, 1962, 10)

William H. Durham goes even further in *Advances in Evolutionary Culture Theory* claiming that all of the vastly different human cultures found in the world today are "related by descent to a common ancestral culture" (Durham, 2003, 188) This would imply a monogenetic approach to cultural development. Durham, quoting Darwin, says that it means "simply that human cultural systems have not been separately created but make, instead, another example of what Darwin called 'one grand system . . . [all] connected by generation'" (Darwin, 1859, 344 as quoted in Durham, 2003, 188) Whether the origin of culture is monogenetic or polygenetic, one thing is certain - cultural systems continually progress and change form depending on the external factors affecting them. No culture was fully created in an instant.

The historical approach does not rely on a single specific model or theory of cultural evolution, rather it bases its conclusions on a broad idea of hereditary derivation. While this type of approach is fundamentally correct (it is a commonly accepted fact that culture has a history) it does not offer a comprehensive understanding of cultural evolution. It does not attempt to answer the important questions plaguing the field. In a nutshell, it is too broad and does not put forward any new or particularly clarifying information. (Lewens, 2015, 7-8)

3.2. CULTURAL SELECTIONISM

Cultural selectionism commits to the belief that, just as the organic evolution, cultural change is determined by the process of natural selection.

[6] It should be mentioned that the notion of gradual change in culture notably differs from one historical approach to another. See Spencer (1990), Currie and Mace (2011).

This statement is not without ambiguities as the question of what are the necessary and sufficient conditions for natural selection to occur is a subject of great disagreement within the cultural evolutionary field. For this reason, throughout the cultural evolutionary discourse many different forms of the selectionist approach have been stipulated, some more permissive while others very restrictive and epistemically demanding.

The idea that cultural traits, to some extent, compete in the proverbial Darwinian struggle is accepted by most cultural evolutionary theories. This is very logical because, as was stated earlier, cultural evolutionary theories are based on the idea that cultural change is in many ways parallel to the organic evolution due to it being under the influence of the three main evolutionary forces - heritability, variation and natural selection. (Mesoudi, 2011, 1)

What then differentiates cultural selectionists from the rest? Why is it considered to be a distinct cultural evolutionary theory? Well, according to Lewens, the principle difference is that they attribute the existing abundance of variation in cultural traits, and consequently in culture itself, to the competitive struggle which underlies the evolutionary fitness principle. (Lewens, 2015, 14)

To increase the epistemological impact of their theory, selectionists need to specify the basic requirements for this process to be considered natural selection. Mostly everyone is in agreement that the main condition of natural selection is that the offspring bears resemblance to the parent. Some even claim that it is the sole condition for natural selection, pointing out that Darwin's theory only required intergenerational resemblance. (Lewens, 2015, 10) Even so, there are selectionists who disagree with that view and instead state that a second demand cultural selectionism sets is the existence of replicators.[7]

In his 1988 book titled *Science as a Process: An Evolutionary Account of the Social and Conceptual Development of Science* David Hull gives an impressive account of the social and intellectual scientific development. Here Hull offers an informational and clearly constructed supplementation of Richard Dawkins' replicator theory.[8] He describes replicators as entities which

[7] See Hodgson and Knudsen (2010) and Hull (1988) for more information.
[8] See Dawkins (1976) for more information.

participate in the evolutionary process by copying the entirety of their structure. To quote his argument:

> An entity that passes on its structure largely intact in successive replications. (…) In order to function as a replicator, an entity must have structure and be able to pass on this structure in a sequence of replications. (Hull, 1988, 408-409)

So, replication in this sense differs from our understanding of reproduction. It demands that the copied entity has an identical structure to that of the original replicator. According to Lewens, a good example of the replication process is the replication of DNA strands. The DNA is made up of two strands which separate during replication and then connect to complementary nucleotides to produce a pair of double-stranded daughter molecules. The structure of the resulting daughter molecules is identical to that of the parent DNA. (Lewens, 2015, 11)

The idea that this type of replication can be found in cultural processes is controversial to say the least. Those who advocate for it, do so based on the belief that an evolutionary explanation of generational resemblance requires some entity due to which the process is even possible. The most prominent theory which claims to identify these entities in the cultural evolutionary processes is the one developed by Richard Dawkins named the Meme theory.

3.2.1. THE MEME THEORY

The memetic approach to culture states that memes are cultural replicators necessary for cultural transmission and selection. So basically, memes are the cultural parallel to genes in genetic evolution. They are understood as units of culture which are transmitted from one mind to another by process of imitation (understood in a broad sense). To better explain what memes are, Dawkins offers a list of phenomena they encompass, and those are as follows: “tunes, ideas, catch-phrases, clothes fashions, ways of making pots or of building arches.” (Dawkins, 1989, 192) In other words, memes are carriers of cultural information that spread really quickly amongst the population. In that sense, we could say that they are influential.

Their influence on people can be recognised very easily if we think about different ideas which are popular. Take for example, the idea that God exists. It is reasonable to assume that at one point in history the concept of God existed in the minds of just a few people. (Lewens, 2015,

25-26) Due to the attractiveness of the idea (because of all the advantages it presented, for example, comfort and a sense of control) it spread quickly through the population.

This example not only illustrates how captivating memes can be, but also that the "success" of a meme (how much it replicates and how quickly) depends on its usefulness for cultural progress and its suitability to the environment it is in. Thence, memes are subject to natural selection.

The first critique of the meme theory which I am going to present takes issue with the idea that humans are passive in their acceptance of memes they integrate into their belief systems. It appears that the meme theory promotes the view that the incorporation of memes in an individual's mind is accidental.

To better understand this point, we can compare this to the genetic processes happening in our bodies which we have no way of controlling.[9] Since memes are modelled after genes, they are also equated in this sense. Yet, instinctively, it seems to me that unlike genetic transmission, we do have an active role in accepting cultural prospects. We have the ability to change our beliefs (even the deeply rooted ones), research, employ critical thinking strategies, etc. As Tim Ingold insightfully remarks while strongly opposing this idea in his work *People Like Us: The Concept of the Anatomically Modern Human:*

> Recall that cultural traits are supposed to adapt to their environment by means of humans, rather than humans adapting by means of their cultural knowledge and skills. In this topsy-turvy world, it seems, human beings are but the means by which traits propagate themselves in an environment. (Ingold, 1995, 16)

I chose this quote because it effectively presents the absurdity of the idea that culture develops on its own, independently of humans, who in this case seem to be presented as puppets whose only job is to host these memes.

However, this argument does not irrevocably damage the meme theory because despite some researchers who support it, memetics are, in fact, compatible with the view that organisms can actively change their environments.[10]

[9] Well, this is not entirely true as modern science advances every day in regards to genetic modification. However, for the argument at hand that point is irrelevant.
[10] See Laland et al. (2001), Mesoudi et al. (2007) for more information.

The bigger issue is found within the claim that cultural units proliferate through a process of replication. Even though the concept of memes might seem well based, the question remains - if two ideas have the same structure does that have to mean that one idea is a copy of another?

In some cases, of course, that is a reasonable conclusion. Nonetheless, there are plenty of examples where we can plausibly infer that two ideas which have the same structure were not created by the process of replication. Let's imagine the first invention of tools by our ancestors. Same tools were found on opposite sides of the world. What that means is that two completely unrelated specimens came to the conclusion that a rock can be used as a tool for different things, like for example, cracking food open. This goes to show that in similar enough circumstances, different people can develop similar ideas without copying them from one another.

Moreover, if we look at the wide variety of religious beliefs which all exist under the same general religion, we can see how one individual can, by means of being surrounded by people of the same religious orientation, reconstruct their ideas into a notion that suits him the best. It cannot be said that these beliefs are directly replicated from one another.

To conclude, due to the reasons mentioned above the position the meme theory occupies in the discourse on cultural evolution is unenviable. More often than not, it is harshly criticised by cultural evolutionists. Even those who advocate it are trying to restrict it to try and make it sounder.[11] There are different cultural evolutionary models which can account for transmission of the similar cultural notions while at the same time avoiding the pitfalls of memetic theory which were examined in this chapter. [12] Due to all of these reasons, I am not a proponent of the meme theory, although I do like the idea that a popularity of a certain cultural notion depends on its attractiveness to the population.

[11] See Sterelny (2006) for more information.

[12] See Henrich and Boyd (2002) for more information.

4. CONCLUSION

Humans as a species have a strong need to understand the world surrounding them. Asking questions is a natural instinct to us, just think of children and a million questions they ask a day. So, it is very logical that we want to understand culture, especially as it is such a major aspect of our lives. It largely determines who we are going to become, how we see the world and our role in it. Still, we do not know how exactly it developed. We do not precisely know the origin of some of our most fundamental beliefs. That is the reason why I became interested in the topic of cultural evolution.

This thesis began with a description of the difficult task of defining culture. Even though a precise and well formulated definition could not be obtained, what I did come out with is a pretty good understanding of the term culture. Culture was presented as a complex network of all the socially accumulated notions - skills, beliefs, values, ideas, notions, etc. - which connect a group of people living in the same habitat and help them progress through time.

Next, it was explained that when cultural evolutionists talk about culture as information, they are not really interested in what it consists of, but rather how it spreads. That is probably the reason why they did not succeed in providing us with a sound definition.

Following, cultural evolutionary theories, which see cultural development through evolutionary notions, were discussed. This approach aims to provide a theory of cultural change which is built by the same scientific methods on which biology is based. However, so far it had not yielded results which could be considered to be on the same level of certainty.

The two cultural evolutionary theories which were examined are the historical approach and the cultural selectionism. The historical approach sees culture as a series of gradual changes happening as time passes. From this perspective, culture as we know it is a combination of all the versions which were preceding it. On the other hand, cultural selectionism puts the focus on the influence of natural selection on culture. Cultural traits are in competition to each other in regards to their fitness. The one which is better adapted survives ad prospers. Just like favourable genes, those traits which are desirable spread quicker. The more they spread, the more they change - usually to the better. I find this position to be the one with best foundations. Of course, it is still vulnerable criticism, however, to me it seems to be the most scientifically reliable one.

However, it is necessary to differentiate it from the meme theory. All meme theorists are cultural selectionist, but not all cultural selectionist are meme theorists. Fundamentally, the meme theory is a form of selectionism which argues for the existence of replicators which make the reproduction of cultural notions possible. The fault of this theory is that it tries too hard to fit cultural evolution into the borders of the organic evolution. It requires non directed replication of cultural notions, which works for the genetic evolution, but culture seems much more deliberate. Moreover, replicators are not necessary for the replication of the ideas of same structure.

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