

GROUP SELECTION AND OUR OBSESSION WITH THE MEANING OF LIFE

1. Biological Explanations of the Meaning of Life

The aim of this paper is to make an unlikely connection between the old question about the meaning of life and some important concepts in philosophy of biology. More precisely, I argue that while biology is unlikely to help us to figure out the meaning of life, the fact that this question has been considered to be such a crucial one could be explained with the help of some consideration of our evolutionary past. I argue that if there is evidence for group selection in the course of human evolution, this may explain not the meaning of life but rather the reason why we are preoccupied with this question. First, I examine what group selection is and what role it played in human evolution. After surveying the evidence for the claim that in the course of human evolution we lived in isolated group societies, I analyse what influence this social structure had on our present psychological dispositions, including our quest for the meaning of life.

I need to state right at the beginning that I am sceptical about any attempt to explain the meaning of life with an appeal to our evolutionary past. This is not what I am attempting to do. What I am trying to explain with the help of evolutionary considerations is our obsession with the question. But as my evolutionary explanatory scheme uses similar considerations as some of the most popular attempts at giving biological explanations to the meaning of life, I need to point out where I believe these latter attempts go wrong.

An influential debate in contemporary philosophy of biology is the ‘units of selection’ debate. There are many ways of raising this question (and, as a result, there are many sub-debates, see Lloyd 2001): Which entity benefits from natural selection? The organism, the group, or perhaps the gene? Which entities compete with one another for survival?

When we talk about the survival of the fittest, do we mean the fittest individual? Or the fittest group? Or the fittest gene?

According to the orthodox view, the unit of selection is the individual. The individual organism benefits from natural selection. But it has been pointed out that this view has some difficulties explaining altruistic behaviour: altruism is by definition bad for the individual. There are two important ways of salvaging the orthodox view and argue that taking the individual to be the beneficiary of natural selection does allow for altruistic behaviour. First, one can argue that altruism is a nonadaptive strategy or an 'error' that is still with us because it has not been sufficiently selected against. Take the following analogy. The human appendix is not evolutionarily useful. Moreover, it slightly decreases our chances to survive. Still, most of us have an appendix, because its cost has not been sufficient enough for it to be selected against. The same argument could be made for altruism. Second, one can argue that although altruism is not beneficial for the individual organism, reciprocal altruism may very well be. I may sometimes do things that decrease my fitness in order to increase yours, but I still do so, because I know that you, in turn, will do the same for me. If this is so, then we avoid the apparent conflict with the claim that the individual is the beneficiary of natural selection.

Some have found these ways of defending the individual as the unit of selection unsatisfactory. An important alternative is the 'gene's eye view' (Williams 1966; Dawkins 1976; Hull 1982, 1988, 2001), according to which the entity that benefits from natural selection is not the individual, but the individual's gene.

The view is that individual organisms are mere vehicles of their genes and the genes make the individuals do whatever helps them to produce more and more copies of themselves. Genes are the replicators of natural selection: they make copies of themselves and the individuals are the interactors (or vehicles) that are interacting with the environment in such a way that would help the next round of replication to be as successful as possible.

Altruism is easily explained in this framework. If I do something that decreases my fitness but significantly increases the fitness of, say, my daughter, then although I do not benefit from this action, the gene that I and my daughter share does benefit.

And here we can finally connect the discussion of the units of selection to the question about the meaning of life. There are stronger and weaker versions of the 'gene's eye view', but it is important to notice how it is

tempting to use this way of thinking about evolution in order to say something about the meaning of life. If it is our genes that benefit from evolution and not us, individuals, then the point can be made that the meaning of the life of individuals is really to help the procreations of the genes whose vehicles we are. The meaning of our life is to help our genes to make as many copies of themselves as possible.

This is a rather austere picture of what our lives are supposed to be about. But, luckily, there are some problems with the suggestion, both empirical and conceptual (see Nanay forthcoming). First, it turns out that the replicator of natural selection should not be identified with the gene. There is a growing literature on ‘epigenetic inheritance’: inheritance from generation to generation without the mediation of genes (see, for example, Jablonka and Lamb 1995). So if it is the replicator of natural selection that benefits from the process, then this beneficiary is not the gene, because the replicator of natural selection is not the gene.

Second, an influential argument in the last decade has been that the genetic and the developmental part of evolutionary explanations cannot and should not be separated from one another. More precisely, it has been argued that there is no sharp distinction between ‘genetic’ and ‘environmental’ developmental causes. As a result, it is a mistake to talk about genes as replicators: it is unclear whether the term replicator is meaningful at all, but if it is, it must denote the entire life-cycle, which makes many features of the ‘gene’s eye view’ problematic (see esp. Griffiths and Gray 1994, 304. See Griffiths and Gray 1997, Oyama et al. 2001, but see also Sterelny and Kitcher 1988, Sterelny et al. 1996).

Third, although the ‘gene’s eye view’ can neatly explain altruism towards individuals who are genetically closely related to us, it cannot explain altruism towards individuals who do not share much of our genetic setup. Further, it cannot explain altruism towards individuals in other species, which is a well-documented subcase of altruistic behaviour (e. g., Payne 1977, Langmore, Hunt and Kilner 2003).

At least some of the ‘gene’s eye view’ theorists would appeal to ‘memes’, the units of cultural selection, in order to explain *human* altruism (although it is worth noting that this still leaves cases of nonhuman interspecies altruism unexplained). Importantly, this leads to another influential biologically grounded account of the meaning of life.

The distinction between replicator and interactor was originally introduced “as a generalization of the traditional genotype-phenotype dis-

inction” (Brandon 1996: 125).¹ This means that there can be, and supposedly there are, entities other than the gene that would count as replicators. The main candidates for such replicators have been memes.

Memes are defined as the “units of the cultural transmission” (Dawkins 1989, 192. See also Dawkins 1982a, 1982b). According to the meme theory, cultural phenomena can be explained, at least partially, with the help of the following evolutionary model: Memes are pieces of information and they compete for survival in a quite similar way as genes do; the difference is that they compete for the capacity of our minds. A meme can be a tune, the idea of liberalism, or the habit of brushing one’s teeth. Those tunes will survive that can get into and stay in many minds. The ones that fail to do so will die out.

It is tempting to extend this account of meme selection into some kind of explanation for the meaning of life (Dennett 2006, but cf. Dennett 1995). If the units of cultural selection are memes and we are really just vehicles for memes (as well as for genes), then the meaning of our lives is to help the memes in our minds to make as many copies of themselves as possible. Again, this may sound rather disappointing to some.

It is important to note, however, that while meme theory is still extremely popular (see Blackmore 1999, Dennett 2003 and Dennett 2006), it has been severely criticized for various reasons, partly for worries about the ontological status of memes (Sperber 1996, Wimsatt 1999, Fracchia and Lewontin 1999) and partly for the differences between the explanatory power of natural selection and meme selection (Richerson and Boyd 2005, Sterelny 2006a, Sterelny 2006b).

Hence, the ‘gene’s (and/or meme’s) eye view’, with its uncanny consequences as to how we should think about the meaning of our life, seems to be problematic. Further, the debate about the units of selection is not settled. We have seen that the two responses we have considered (the individual, the gene) are problematic. We need to now consider a third alternative: the suggestion that the beneficiary of natural selection (at least sometimes) is the group.

2. Group Selection

The suggestion is the following. The ‘gene’s eye view’ (and ‘meme’s eye view’) theorists were right in rejecting the claim that the individual is the beneficiary of natural selection. But they were wrong when they tried to replace the individual with something smaller: the gene. Quite to the

contrary, the beneficiary of natural selection is something bigger than the individual: the group (Wade 1978).

This proposal can handle the problem of altruism quite well: even if altruism is not beneficial for the individual, it is indeed beneficial for the group. If I do something that decreases my fitness, this can still be evolutionarily useful, as long as it increases the fitness of the group, since the fitness of the group is what counts (given that the unit of selection is the group).

So the general idea of group selection seems promising. But it needs to be noted that there are many ways of cashing out this general idea, some of them more convincing than others. These ways of talking about group selection fall into two basic categories: one that takes the group to be the replicator of natural selection and one that takes the group to be the interactor of natural selection. Although I alluded to the replication-interaction distinction when introducing the ‘gene’s eye view’, I need to make this distinction more explicit in order to be able to explain the differences between these two versions of group selection.

The concept of replicator and that of interactor were originally introduced by Richard Dawkins and David Hull.² According to David Hull, selection consists in repeated cycles of two separate processes: replication and interaction (Hull 1981, Hull 1988, Hull et al. 2001). Hull defines selection as:

The repeated cycles of replication and environmental interaction so structured that environmental interaction causes replication to be differential. (Hull et al. 2001, p. 53)

In turn, Hull defines the unit of replication, the ‘replicator’, as “an entity that passes on its structure largely intact in successive replications” (Hull 1988, 408. Cf. Hull 1980, 318, for a slightly different definition). The unit of interaction, ‘interactor’, on the other hand, is defined as the “entity that interacts as a cohesive whole with its environment in such a way that this interaction causes replication to be differential” (Hull 1988, 408; cf. Hull 1980, 318).

This replication-interaction model of selection is supposed to help us to understand what is at stake in the units of selection debate: if selection is replication plus interaction, then we should not talk about the units of selection, but rather the units of replication and the units of interaction, which may not be (and in fact most often are not) the same. The replica-

tion-interaction distinction in itself will, of course, not solve this problem, but it is supposed to help us to formulate the problem in a way that would make it possible to tackle it.

In the classic exposition of the idea, the replicator of natural selection is the gene, whereas one possible interactor is the organism itself. Genes are passed on and the organism interacts with the environment in such a way that this interaction causes the replication of genes to be differential. In other words, those genes that are responsible for the development of more successful organisms are more likely to replicate.

We have seen that the story of replication in natural selection is further complicated by epigenetic inheritance, but a more general question needs to be asked. If we are considering the possibility of taking groups to be the replicators or interactors of natural selection, we need to be very explicit about how exactly to understand replication and interaction.

Hull's definition of replicator was "an entity that passes on its structure largely intact in successive replications" (Hull 1988, 408). We are faced with the question of what "passing on the structure" implies. One of Richard Dawkins's various definitions of replicator shows clearly that 'passing on' or 'copying' need not mean something strong. Dawkins writes: "I define a replicator as anything in the universe of which copies are made" (Dawkins 1982b, 83).

The more restricted definition of John Maynard Smith and Eörs Szathmáry is also quite weak. They claim that any entity can count as a replicator that can come to existence "only if there is a pre-existing structure of the same kind in the vicinity" (Maynard Smith and Szathmary 1995, 41). In other words, replicator is "an entity that only arises by division or copying of a pre-existing entity" (Maynard Smith and Szathmary 1995, 58).

Intuitively two aspects of "passing on" or "copying" seem necessary: similarity and causal connection. This intuition has been captured by Peter Godfrey-Smith's definition:

Y is a replicate of X if and only if: (i) X and Y are similar (in some relevant respects), and (ii) X was causally involved in the production of Y in a way responsible for the similarity of Y to X. (Godfrey-Smith 2000, 414)

It is important to note that even this notion is very weak (see also Nanay 2002a). Godfrey-Smith himself points out that photocopying, for example, is a replication process according to this definition.³ Also, to take a different

example, raindrops following the same trickle on a window are replicators as well, since they are similar and a trickle is causally involved in bringing about the fact that the next raindrop will follow the same trickle.

Several points need clarification here (see Godfrey-Smith 2000 and Nanay 2002a for a more detailed analysis). First of all, it has to be noted that the replicator is only one of the numerous factors that are causally relevant in the formation of the interactor (Griffiths and Grey 1994, esp. p. 298ff and see Sterelny, Smith, and Dickison 1996 for a critical overview). In the gene/organism case, for example, during the development of the organism numerous factors have influence on the formation of the organism besides the genes.

Another point of possible misunderstanding is implied in the semantics of the word “replicator.” It is not clear whether the replicator is the entity that copies or the one being copied. Or maybe both of them at the same time: the entity copying itself (Lewontin 1991, 48–49). Again, the gene/organism case shows that genes are copied by a complicated mechanism; genes do not copy themselves. I will use the term replicator to refer to the entity being copied.

Where does the replication/interaction distinction leave us with regards to the question whether groups could be considered to be the units of selection? If we take this distinction seriously, then there are two ways of making sense of this suggestion. First, by claiming that the group is a replicator, and second by claiming that the group is an interactor.

The former suggestion would imply that groups somehow make copies of themselves. This suggestion is not impossible to make sense of: one could argue that groups maintain their existence and identity in spite of the fact that their members are being replaced all the time with new ones. This idea of ‘temporal replication’ is certainly a major departure from the original notion of replication: this was probably the reason why the idea of group selection has not been very popular among biologists.⁴

The second possible way of cashing out what group selection means is to say that (at least sometimes) the *interactor* of natural selection is the group. The replicator is the gene (with the caveat of epigenetic inheritance), but the entity that interacts with other entities and competes for survival—at least in certain cases—is the group. This is exactly the route taken by Elliott Sober and David Sloan Wilson, in their book *Unto Others*, which has revived the biological and philosophical interest in the idea of group selection.⁵

What decides whether the interactor of a natural selection process is the group or the individual? Deer for example do not live in groups, so in their case the interactor is unlikely to be the group. How about those animals that do live in groups? Do they all undergo group selection? Not at all. If, however, the variability among groups is significant enough and if the variability within a group is small enough, then the selection among groups ‘fades off’ the selection among individuals.⁶ In other words, if the genotype of members of a group is similar enough and if the genotype of members of two different groups is different enough, then we can talk about group selection. To sum up, group selection requires strong group cohesion within a group and relative isolation between groups.

So we have a clear alternative to the ‘gene’s eye view’ about the units of selection. But does this way of answering the question about what benefits from natural selection help us to understand the meaning of life? Not really. As we have seen, group selection requires strong group cohesion within a group and relative isolation between groups. But in the present human society, it is unclear even whether we can talk about human groups, let alone groups with strong internal cohesion and high degree of isolation.

If it were the case that humans live in isolated group societies, then one could maybe argue that the meaning of the lives of individual group members is somehow derivable from the interests of the group. But given that the present human society does not at all consist of isolated groups with strong internal cohesion, any such explanation would be pointless.

The rather negative conclusion is that the unit of selection debate will not help us to understand the meaning of life. But, I will argue that *past* group selection in the evolutionary history of humans may help us to understand not the meaning of life, but the very existence of the problem of the meaning of life.

3. Isolated Group Societies in Human Evolution

But why is this relevant? So far I have only talked about the general idea of group selection in the case of animals. Why is this interesting when we talk about humans? It is interesting, because a case has been made that there is evidence for group selection in the evolutionary history of humans.⁷

Primatologists found a high degree of group cohesion in nonhuman primates.⁸ Thus, it would be surprising if group cohesion were missing from human evolutionary history. Moreover, it has been argued that because of

certain ecological factors in the Pleistocene era, humans had to live in groups that were isolated from one another for longer stretches of time, allowing for the emergence of very similar genotype within one group and rather different genotype between groups.⁹ This means that group cohesion may have been much stronger in early human groups than in primate groups. One could even argue that a crucial element of human evolution was precisely the strong group structure (Dunbar 1996, Tomasello and Call 1998). According to the findings of primatology and recent theories in cognitive science, a crucial element of human evolution was the increasing importance of social relations.¹⁰ If we put these two claims together, we have good reason to suppose that group selection was an important feature in human evolution. As Charles Darwin himself famously said:

A tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to aid one another, and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection. (Darwin 1874, 179)

When I described group selection in the last section, I said that we can talk about group selection if there is sufficient *genetic* similarity between group members and sufficient *genetic* differences between different groups. One way of talking about human group selection is to extend this picture to humans (Hamilton 1964, Alexander 1974, Eibl-Eibesfeldt 1989). But this is not the only option and not even necessarily the one Darwin was alluding to. Maybe the relevant intragroup similarities and intergroup differences are not genetic, but cultural (Richerson and Boyd 2005, Richerson et al. 2005, Boyd and Richerson 2001). If this is so, then what mattered from the point of view of natural selection among groups was not the genetic similarity but the uniformity of the belief systems and norms of the group members.

This is all very promising, but there is an obvious objection that can be raised. Nowadays we could not find any groups that would fulfil all the criteria of group selection. In other words, we no longer find isolation from all the other groups and strong inner cohesion, even if we loosen the criterion of genetic similarity/difference and replace it with cultural similarity/difference.

This objection, however, could be very fruitful indeed. I'll argue that the model of group selection no longer applies to contemporary societies. Our present society has been formed as a result of the disintegration of isolated groups that were the units of the human evolution.

As we have seen, group selection requires significant similarity among members of one group and significant differences between members of different groups. This obviously does not hold in the present society. Therefore, even if group selection did take place at a certain period of human evolution, it no longer does. Some traces of isolated group societies could be found in sects as well as some societies that have not been exposed to the global civilization, but otherwise this form of social organization disappeared. Groups gradually overlapped, and the isolation became weaker, and finally disappeared.

How does this help us to address the question about the meaning of life? It is tempting (although I think we should resist the temptation) to make the point that in isolated group societies the meaning of life was to increase the fitness of the group: the individual's relation to the group was a dependence relation. The survival of the group was more important than the survival of herself. The individual—if needed—sacrificed him or herself for the survival of the group. It may even be tempting to compare the individual-group relation in these societies to the cell-organism relation. The suggestion would be that the individual did not have her own goals and values; all her interests were dependent upon the interest of the group. She did not have to make decisions, since the group norm, the group value system, determined clearly what she was supposed to do and what she was not supposed to do. She was a part of the machine.

Some have argued that this is indeed the kind of society humans lived in at the dawn of civilization. As Bruno Snell said, and Paul Feyerabend echoed, “in Homer, we never find a personal decision, a conscious choice made by an acting human being” (Snell 1966, 18, see also Feyerabend 1987, 708).

However, before getting carried away with this line of reasoning, it is important to note that we have extremely little information about the social organization of these isolated group societies. And we have even less information about how the individuals in these societies experienced it. I will suggest a much less direct connection between isolated group societies and the question about the meaning of life in the next two sections.

4. Evolutionary Psychology and the Preference for Group

My claim is that although isolated group societies have disappeared, the humans' biological dispositions for forming a group have not. In order

to find support for this claim, we need to turn to one of the most influential recent theories in cognitive science: evolutionary psychology.

The central claim of evolutionary psychology is that our mental capacities have to be analyzed with reference to the environment where they have evolved (Barkow, Cosmides and Tooby, 1992; Buss, 1994, 1995; Dennett, 1995; Pinker, 1997; Plotkin 1997; Wright, 1994; Buller 2005). Understanding why the human hand functions the way it does undoubtedly implies analyzing the environment it has evolved in. The same could be said about mental capacities: the examination of the environment of our ancestors might help us to understand our present emotions or food preferences.

The most important point that has been made by evolutionary psychologists is that the environment our mental capacities have been adapted to is not necessarily the same as the environment we live in now (this is one of the most significant differences between sociobiology and evolutionary psychology. Cf. Wilson, 1975, 1978). To quote one of the best-known examples: preference for sugar was adaptive in the Pleistocene environment where calorie-rich food was rare. In the present environment, however, the same preference is no longer adaptive, since (at least in some parts of the world) it is not vital for survival any more and it may also lead to obesity and bad teeth (Buss 1995). Our preference was fixed in the Pleistocene environment and it has not changed much since then, but the environment itself has changed. Thus, in analyzing a certain mental capacity, the evolutionary environment that has to be taken into consideration is not (or not only) the present environment but rather the Pleistocene environment to which this mental capacity has been adapted. This environment is usually called the Environment of Evolutionary Adaptedness (EEA), and we do not have any direct evidence of what it looked like, but some of its characteristics can be postulated based on what we know about how our ancestors lived in the Pleistocene era (see Nanay 2002b and Nanay 2004 for some problems with this seemingly *ad hoc* postulation of EEA). The claim is that our mind has been (mainly) shaped by the environment of our Pleistocene ancestors.

It is important to emphasize that this environment does not only mean ecological environment, but also the social environment.¹¹ Our mental dispositions and capacities were shaped not only by, say, the availability of sugar, but also (or, maybe even more importantly) by the structure of the groups we lived in. Groups have disappeared, but the human mind that is

adapted to the social environment of isolated groups has not changed much. Hence, our disposition to live in isolated groups remained the same as it was when there were such groups around.

Evolutionary psychology is not uncontroversial: it has stronger and less strong versions, some of which have been severely criticized (see Buller 2004 for an excellent summary). The three most influential criticisms point out some kind of commitment evolutionary psychology needs to make to extremely controversial views about the human mind. The most important of these are adaptationism, the view that most of our traits are adaptations, modularism, the view that the human mind consists of informationally encapsulated modules, and innatism, the view that most of our traits are genetically coded (and not learned). Before proceeding, I need to point out that the version of evolutionary psychology I will use in my argument is a relatively weak one and it does not need to make any of these three controversial assumptions. First, it is possible that our group preference is not an adaptation, but rather a by-product of some other adaptive processes. Second, it is possible that our group preference is not a psychological module that is informationally encapsulated and insensitive to the other processes in our mind. Third, it is possible that our group preference is not fully genetically coded: it may be, in part, learned (see Buss 1995 for a detailed analysis of these three supposed commitments of evolutionary psychology). It is also important to emphasize that although some versions of evolutionary psychology attribute all explanatory power to the Pleistocene environment and claim that the course of the history of mankind since the Pleistocene is irrelevant in understanding the human mind, I do not endorse this view. I'm not saying that the Pleistocene environment is the only one that is relevant in understanding the evolution of the human mind, only that it is very important.

Let us pause and summarize the argument so far. Humans lived in isolated group societies during the Pleistocene era. Our mind was (partly) adapted to that social environment; hence, we have a natural propensity and disposition to be members of a group. As Darwin suggested, those groups whose members possessed to "a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, [and who] were always ready to aid one another, and to sacrifice themselves for the common good" (Darwin 1874, 179) were selected over other groups. Thus, we, the descendent of members of the successful groups, inherited the propensity to develop

the traits Darwin describes. This is what Boyd and Richerson describe as the ‘tribal instinct hypothesis’ (Boyd and Richerson 2001. See, also, Csányi 2001).

We have a lot of independent empirical evidence that this is so.¹² One important and widely popularized finding in social psychology is that it is surprisingly easy to trigger group loyalty in completely artificial, randomly created groups (Brewer 1979; Brewer and Brown 1998; Taylor *et al.* 1987; Tajfel and Turner 1986). This propensity to identify with random groups we find ourselves members of is an important psychological trait we all seem to have (Baumeister and Leary 1995).

Today there are no isolated group societies. We are born with a natural disposition to be members of isolated groups into a world without isolated groups. Our disposition to form groups is as maladapted to the present environment as our preference for sugar. Both psychological traits evolved in an environment that is very different from the environment we live in. As a result, in the case of both psychological traits, there is a mismatch between our evolutionarily fixed trait and the present environment. In the case of our sugar preferences this mismatch mainly leads to obesity and bad teeth, but in the case of our social dispositions, it leads to a very complex attitude towards society: a simultaneous attraction and reluctance to be part of a group, which may be a similar attitude to the one captured by Kant’s famous phrase of ‘unsociable sociability’ (*ungesellige Geselligkeit*) (Kant 1975 [1784], see also Wood 1991). And it may also explain why we are so keen to think about the meaning of life.

5. Our Obsession with the Meaning of Life

What follows from the argument I presented so far is that we are biologically disposed to think of ourselves as members of isolated group societies, or, rather, as potential members, as such group societies no longer exist. In other words, we are biologically disposed to perceive our lives as being part of, or determined by, a larger system: the group. Again, the paradox is that no such larger systems exist. It is time to connect these claims to the question about the meaning of life.

If we accept meaning holism (or molecularism), the meaning of a sign is only interpretable with reference to a larger sign-system. There are many ways of putting this fairly generally accepted point. In the context of semantics, the more specific claim is that the meaning of a word presupposes the meaning

of other words.¹³ With regards to mental states the claim is that the content of a mental state presupposes the content of a number of other mental states. There are stronger and weaker versions of meaning holism, but a fairly weak, quasi-consensual statement would be the following: if we want to talk about the meaning of a token entity, we need to specify the system this entity is a constituent of and we can only specify the meaning of this entity in relation of this system. If this entity is a word, then the system is our language: we can only specify the meaning of a word in relation to a language. The meaning of the word 'chat' is different depending on whether we consider it in relation to the French or the English language.

If we accept this weak version of meaning holism, then the hope is that the notion of the meaning of life could be understood in similar terms. If the meaning of a word depends on the language system the word is a constituent of, then we can make a similar claim about the meaning of other entities, such as our lives. Similarly, if X is an individual's life, then the meaning of X could only be specified in relation to the system X is a constituent of.¹⁴ But what is X a constituent of? Is there any system that our lives could be argued to be a constituent of? I don't think so. As I said in section I, it is unlikely that we can give a satisfactory answer to the question about the meaning of life.

But the aim of the paper is to explain why we are obsessed with this question. And the considerations from meaning holism may help us here. Again, the claim was that if X is an individual's life, then the meaning of X could only be specified in relation to the system X is a constituent of. We do not have such a system now. But we do have a biologically entrenched psychological disposition to be part of an isolated group society: to be a constituent of such meaning-giving larger system. As we are biologically disposed to look for isolated groups we can be members of, we are also biologically disposed to look for a larger system our life can be a constituent of and in relation to which our life can acquire its meaning. The problem is that this is a futile search: there are no isolated group societies around nowadays; hence there are no meaning-giving larger systems in relation to which we can make sense of the meaning of our life.

Interestingly enough, in many cases where someone claims to have found the meaning of life, she perceives herself as part of a group with strong cohesion and a high degree of isolation from other groups. I mention a couple of important examples.

Various forms of nationalism are somewhat sad examples for finding the meaning of life. But nationalism is a prime example for a group that our biologically fixed disposition to be members of a group can latch onto. If the future of the nation is the most important thing for someone, then she becomes a component of a system again, therefore the meaning of her life is derived from this higher order system, that is, the nation (see Comaroff and Stern 1995 for a good summary). As Rousseau wrote in his Polish Constitution: "First of all, you should be Polish. You could be human only on the second place."¹⁵ Self-sacrifice for the nation has always been regarded as something heroic and morally valuable, which is also an important feature of belonging to a group: the survival of the nation/group is more important than the survival of the individual. Isolation is of key importance for the nationalist as well. Unfortunately, in a number of historic examples, isolation often entails attempts to eliminate the neighbouring groups.

Sects and religious groups could also be conceived as artificial groups that our natural affinity for being part of a group could latch onto.¹⁶ Sects have a high degree of group cohesion (not genetically, but mainly with regards to behaviour and commonly held beliefs) and a high degree of isolation from other groups. Those who have found religion and, as a result, are no longer wondering about what the meaning of life is, do so because they perceive themselves as constituents of a larger meaning-giving system.

Maybe more surprisingly, romantic love could also be considered to be an attempt to become a component of a system: of an isolated group with two members only.¹⁷ Again, the meaning of life here makes sense only in relation to this two-member group. And, again, cohesion and isolation plays an important part in these groups.

I considered a couple of examples for artificial groups that one's biologically entrenched disposition to look for groups to be a member of can latch onto. My claim is not that one's idea of the meaning of life is always of this kind. But if the argument I presented here is correct and it is true that our evolutionarily fixed psychological disposition to look for the meaning of life is an extension of our evolutionary fixed psychological disposition to be part of an isolated group, then taking the meaning of life to derive from some larger group one is a part of is a natural way of satisfying this disposition.

But there are, of course, many other ways of answering the question about the meaning of life. Our urge to question the meaning of life is an

evolutionary entrenched disposition and the aim of this paper was to try to explain how we came to have this disposition. But what we do with this disposition is entirely up to us.

The aim of the paper was not to explain the validity of our answers to the question about the meaning of life, but to explain why the question itself is being raised and why it is considered to be so important.

Bence Nanay

Syracuse University

NOTES

1. One could question whether the concept of replicator should be conceived as the generalization of the concept of gene or, as Brandon seems to suggest, that of genotype. In what follows, I will assume that the concept of replicator is most commonly interpreted to refer to tokens and not types and therefore is the generalization of the concept of gene.

2. Dawkins 1976/1989, Dawkins 1982a, Dawkins 1982b. Hull 1980, Hull 1988. Dawkins contrasted replicators with vehicles, and the term ‘interaction’ was introduced by David Hull.

3. If we accept Hull’s somewhat stronger notion, photocopying will not qualify as replication since, according to Hull, “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. If all a gene did was to serve as a template for producing copy after copy of itself without these copies in turn producing additional copies, it could not function as a replicator” (Hull 1988, 409).

4. The most influential book against the idea of group selection was published by George C. Williams (Williams 1966).

5. Sober and Wilson 1998, see also Wilson and Sober 1994.

6. A good and comprehensive overview of this question was given by Robert N. Brandon, who took into consideration both the philosophical and the biological aspects of the problem. Here Hoff coins the term “fading” (Brandon 1996, esp. p. 132f.).

7. See esp. Wilson 1989; Sober and Wilson 1998; Richerson and Boyd 2005.

8. Dunbar 1996; Mithen 1996; Donald 1991; Byrne and Withen 1988; Withen and Byrne 1997.

9. See Potts 1996a, 1996b, 1998a, 1998b; Csányi 2001; and Richerson *et al.* 2005.

10. Tomasello and Call 1998; Cheeny and Seyfarth 1990; Cheeny, Seyfarth, and Silk 1995; Carruthers and Smith 1996.

11. See Barkow, Cosmides, and Tooby 1992.

12. See Boyd and Richerson 2001 and Richerson and Boyd 2005 for summaries

13. See, for example, Quine 1960; Davidson 1980; Katz 1990.

14. This is why the answer “42” to the question “What is the meaning of life?” sounds absurd in Douglas Adams’s *The Hitchhiker’s Guide to the Galaxy*.

15. For the Polish Constitution by Jean-Jacques Rousseau see: Rousseau 1989, See also: Lukowski 1994.

16. The importance of isolation and coherence of religious sects is examined, for example, in Hostetler 1963, Chs. 1–2.

17. The same argument can be made for romantic notions of friendship. See Wallace and Hartley 1988.

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