

5. What is the main difference between human minds and the minds of other animals? What explains this difference? Is this a sharp boundary or is it relatively superficial?

In this paper, I will argue competency is the main difference between human minds and the minds of animals, specifically its language and social cognitive components. These differences are found in both physiological and psychological abilities, and while the differences are apparent, there is no real boundary. For instance, great apes and humans are closely related, but “our divergence from great ape norms is still more extreme; in particular, in the cooperative aspects of our social lives” (Sterelny 2013). Additionally, as Premack (2007) points out, “the advanced function most clearly associated with the reorganization of the human brain is complex social cognition.” I argue not that humans are more intelligent, but rather their competency is particularly different from that of non-human animals because of evolutionary deviances that produced human communication and social cognition. These abilities enabled humans to collectively gain information from their environment and shaped their environment to fit their needs in an effective manner, and this positive feedback loop sped up their ability to adapt to that environment (Sterelny 2013) compared to that of non-human animals.

While non-human animals might share some similarities, the differences are quite large. Premack (2008) discusses how “the broad range of cognitive cases, which includes teaching, causal reasoning, short-term memory, planning, TOM, etc., consistently shows fundamental limitations in the animal version of the human competence.” Premack goes on to discuss how this is mainly attributed to the differences in social cognition and communication both on a psychological and physiological level. Furthermore, as Sterelny (2013) laid out, “virtually all the newly discovered human singularities are located in areas associated with either complex social cognition [theory of mind (TOM)] or language.” So while humans and chimpanzees share

many similarities, their main differences lie in how they socialize and that eventually came to manifest itself in physiological changes. For instance, “the animals attribute only two mental states, goal-seeking and perception” (Premack 2008) and more specifically “in contrast to the chimps, humans cooperated in sharing information, not just in securing resources and guarding against danger” (Sterelny 2013). The chimp species placed a different emphasis on what they deemed significant information to share, while human’s focused on passing down technical competence to their offspring which explains how their competency was able to evolve at a quicker pace.

Moreover, the impact of this positive feedback loop enabled humans to evolve at a relatively fast speed because they were able to learn from their parents and extended family members. Sterelny (2013) discussed how since it is difficult for males to be confident of paternity, “male chimps and bonobos do not invest in their offspring.” The investment in offspring is crucial in solidifying new adaptive traits because oftentimes, investment involves teaching. Sterelny argues for an apprentice model to represent evolutionary changes along the hominin branch, because skills like human technical competence or tool use, did not consistently increase. When generations are unable to pass on methods and mechanisms for a particular skill then the following generations have to start from a figurative square one. Since there are reversals, it shows that humans did not evolve to be more individually technically intelligent, right away. Instead the increases were because of interactions with their “social environment and local demography” (Sterelny 2013). As Avital and Jablonka (2000) discuss, “the behavioural differences that are transmitted through social learning also provide the raw material on which

natural selection acts.” When species like chimpanzees are unable to pass on their learned traits, it slows down the process of genetic evolution.

Furthermore, the boundary between human and non-human animal competency is not sharp in that non-human animals should aspire to reach a cognitive capacity like that of a human, but rather they simply diverged and evolved differently. Human traits like social cognition and communication are the main differences. As Premack (2007) points out, “the disparity between human and animal cognition is compatible with the disparity between human and animal brains,” meaning the stark differences between human and non-human animal cognition; are also reflected in physical and neurological differences. Sterelny (2013) describes human life, “a life dependent on communication depends as well on the evolution of new cognitive capacities: on communication and social navigations.” Communication and social navigation differences arise from the divergence from a common ancestor where hominins eventually gained the capacity to verbally communicate and evolved their social cognition, and created this difference in competency. (“Hominins are species on our branch of the hominoid tree after the split with the chimpanzee & bonobo line” (Pontzer 2013)). Thus, I argue there is not a sharp boundary between chimpanzees and humans for instance, but rather when the two species broke off from the hominoid tree they have since evolved rather differently and they could eventually have these traits, but they are currently in its preliminary stage.

Just as Sterelny suggests that “hominin evolution built on an already impressive great ape baseline,” since there were many common impressive cognitive capacities to work off of before splitting off, we could see similar traits evolving in the great ape branch of evolutionary lineage.

Therefore, in opposition to this view, it is possible that chimpanzees will eventually evolve to communicate within their species or we may find evidence to suggest it currently exists.

However, these changes in evolution between humans and great apes are occurring on a different timescale. Sterelny claims, “expansion is cause as well as effect. Human environments became less stereotyped and more complex, in part as a result of human’s own activities. Humans interact with their physical, biological, social and technical environment; we molded our world as well as responding to it.” As a result, “these feedback loops explain the rapidity of the hominin divergence from the chimp lineages” (Sterelny 2013). Human traits like communication and social cognition enabled humans to adapt to new environments and then mold these environments to fit their needs and then were able to adapt to their environments more efficiently and eventually evolve their social and language capabilities at a much greater speed.

All in all, the main difference between human minds and animal minds are their forms of competence. Their competences were different mainly due to the human species’ capacity to communicate and form social relationships. These abilities coupled with their more hands on treatment of offspring enabled them to more efficiently pass on their skills to subsequent generations. They were not initially genetic changes until random mutations introduced improved skills that supported survival. With the sharing of information in a social setting, humans were more readily able to shape their environments to suit their needs. As a result, they were able to thrive, learn more, and adapt even better to their environment. It’s quite possible that because chimpanzees will eventually evolve to have similar traits to that of humans. I do not intend to say that chimpanzees do not have higher order cognition, but instead their limited

ability to communicate and engage socially means they have a different type of competence and thus is the main distinction between humans and non-human animals.

Bibliography

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