Did reasoning in humans evolve for purposes of communication?

Exploring the relation between reasoning and communication from an evolutionary perspective

Two important cognitive skills that are often considered to set humans apart from their evolutionary cousins are on the one hand our remarkable capacity for reasoning, and on the other our profound linguistic abilities.

This thesis aims to take a closer look at each of these cognitive capacities from an evolutionary perspective. Ultimately, the goal will be to establish the nature of the relation between reasoning and communication: did reasoning in humans evolve for the purpose of enabling communication?

1 A quick glance at causation in evolution

In order to answer the question of whether one thing evolved for the purposes of, or because of, another, a brief look at what this entails is in order. I will analyze what it means for something to evolve because of another thing using findings in philosophy of biology (Ayala (1999), and possibly Allen, Bekoff, and Lauder (1998) and Wright (1976)). The purpose of this chapter is not to provide a complete overview of theories of causation in evolution, as I consider this to be out of scope. It is merely to provide a foundation to the claims on evolutionary causation later in the thesis.

2 Reasoning: an evolutionary perspective

In this chapter, I will delve into reasoning as a cognitive capacity by considering its evolutionary origins. An influential view on the evolution of reasoning is the *argumentative theory of reasoning*, first posited by Mercier and Sperber (2011) and further expanded upon in Mercier (2016) and Mercier and Sperber (2017). This view states that the main function (in a biological sense, i.e. the reason it evolved) of reasoning is to devise arguments and evaluate those of others in a dialectical setting. Ultimately, on their view, this mechanism serves to enhance social status.

I will scrutinize this theory and consider competing theories.

3 Communication: an evolutionary perspective

4 The relation between reasoning and communication

Now that we have sketched a view of the evolution of reasoning and communication in humans, it is time to consider the intersection of these two capacities.

Summary

In conclusion, the preliminary table of contents of my thesis will be as follows:

- Introduction
- 1. A quick glance at causation in evolution
 - What does it mean for a trait to evolve *because of* another trait?
- 2. Reasoning: an evolutionary perspective
 - Why might we have evolved to possess the reasoning skills we do?
- 3. Communication: an evolutionary perspective
 - Why might we have evolved to possess the communicative skills we do?
- 4. The relation between reasoning and communication
- Conclusion

Preliminary bibliography

- Allen, Colin, Marc Bekoff, and George V. Lauder (1998). *Nature's purposes: Analyses of function and design in biology*. MIT Press.
- Ayala, Francisco J. (1999). "Adaptation and novelty: teleological explanations in evolutionary biology". In: *History and philosophy of the life sciences*, pp. 3–33.
- Heyes, Cecilia (2018). *Cognitive Gadgets: The Cultural Evolution of Thinking*. Harvard University Press. DOI: 10.4159/9780674985155.
- Mercier, Hugo (2016). "The argumentative theory: Predictions and empirical evidence". In: *Trends in Cognitive Sciences* 20.9, pp. 689–700.
- Mercier, Hugo and Dan Sperber (2011). "Why do humans reason? Arguments for an argumentative theory". In: *Behavioral and Brain Sciences* 34.2, pp. 57–74.
- (2017). The enigma of reason. Harvard University Press. DOI: 10.4159/9780674977860.
- Tomasello, Michael (2008). *Origins of human communication*. MIT Press. DOI: 10.7551/mitpress/7551.001.0001.
- Wright, Larry (1976). *Teleological explanations: An etiological analysis of goals and functions*. University of California Press.