

Review of: "On the subject part I: what is the subject?"

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Frauen's paper discusses an attempt to bridge the gap between descriptions of internal, subjective experiences and descriptions of objects in the external world. This gap is a Cartesian legacy: it was Descartes who first argued that we have direct, privileged access to our subjective experiences. Statements of judgments concerning objects are according to Descartes secondary to statements of judgments concerning these subjective experiences.

Descartes's subdivision raises the question of how subjective experiences arise. It is easy to see why this is a difficult question. Descartes argued that we can understand the inanimate world in terms of mechanics (or matter in motion). But how do subjective experiences arise in this physical world? Descartes had of course an answer. He distinguished two worlds, namely the physical and the mental world. He explained subjective experiences as the result of interactions between these two worlds. For example Descartes assumed that, if someone has a pain, he or she feels this pain in his mind as the result of interactions between mind and body. Although humans say that they feel a pain in for example their toe when they have stubbed it against something, Descartes argued that the pain is felt *as if* the pain was present in the body (for the subjective experience is felt in the mind). And although humans say that they for example see a red apple in the external world (and consider red to be a property of the apple), Descartes explained perceptual experiences of the colour of objects as experiences in the mind caused by the impact of particles upon our senses: as the result of the effects of these particles, nerves connected to the senses transmit signals to the brain where, as the result of the interaction with the mind, perceptual experiences are generated in the mind.

Descartes added that animal sensations (like pain) and perceptions are fully explicable as non-conscious mechanical responses, for animals lack subjective experiences (the other animals lack a mind). Hence, if we take the ideas of Descartes seriously and attempt to extend them Darwin's theory, the essential evolutionary question seems to be how we can understand that the mind (characterized in terms of conscious experiences) evolved in humans alone. The problem is that a satisfying answer has never been given. For this reason many have argued, including Frauen, that we should modify some Cartesian ideas in the light of the later theory of evolution developed by Darwin.

After Darwin, Frauen argues, the Cartesian idea that the other animals lack a mind is no longer tenable. There is no essential difference between humans and the other animals, for traits gradually evolved during the course of evolution. Frauen argues that we can also expect that subjective experiences of humans gradually evolved, raising the possibility that subjective experiences are present in other animals (and perhaps plants). However, the question how we can investigate these experiences is not an easy one, for it is unclear how we can investigate these private, subjective experiences in non-human animals. Humans can express what they experience by means of a language, but the other animals do not use a language. Moreover, their subjective experiences may differ from those of humans.

There is another reason why modern evolutionary theory may aid us to correct Cartesian ideas. Frauen and others argue that we do not need to invoke Cartesian substance dualism for explaining the presence of subjective experiences in an objective world (notice that dualism has roots in religious doctrine: the immortal soul is conceived to have existed prior to birth and embodiment, and to survive death of the body). For explaining how subjective experiences are generated (and evolved during the course of evolution), we can perhaps use the idea that subjective experiences *emerged* as the result of a major evolutionary transition, just as we can explain how for example multicellular organisms with organs emerged as the result of cooperation between unicells. The point to notice here is that, when multicellular organisms evolved out of unicells, natural selection started to act on the whole multicellular organism. New traits and capacities could then evolve. For example, cells started to exchange molecules between them and later extended these cooperative interactions by producing ligands and receptors resulting in chemical communication. Another innovation was cell differentiation as the result of new mechanisms of gene regulation. When the differentiated cell state was maintained during cell division, specialized cells evolved resulting in organs (e.g. the heart, limbs and sense organs) that could execute different functions. Thus, we can explain the emergence of organisms with organs exhibiting behaviours not present at lower levels of organization. And since we can also explain how chromosomes and later unicells emerged as the result of cooperation between self-replication molecules, modern evolutionary theory clarifies why we do not need to invoke a mysterious vital force for understanding how forms of life evolved out of inanimate substances. These observations raise the question whether we can explain the emergence of subjective experiences in a similar way. The problem is of course that it is hard to see that subjective experience (or the mind), unlike a multicellular organism, can be conceived as a new (material) entity.

Frauen explores the question whether these alternative evolutionary explanations are sufficient for the understanding the evolution of subjective experiences in humans, the other animals, and perhaps other creatures like plants. He also asks what a reasonable alternative could be for the Cartesian conception of the mind as an immaterial substance, and discusses some ideas of Kant (and Fichte) as possibilities. For obvious reasons this is a sensible possibility, for Kant rejected both Cartesian and empiricist conceptions of the mind: the mind is according to Kant neither an immaterial substance as Descartes thought, nor, as for example Hume thought, a bundle of perceptions. Kant also repudiated foundationalist epistemology of for example Descartes and Locke: our knowledge of how things are in the world is not inferred from how things sensibly seem to us to be, as rationalists and empiricists believed. Kant argued that we should study the -what he called- transcendental roots of the possibility of conceptualized experience. Frauen wonders whether Kant's concept of a transcendental mind may be a useful concept for clarifying the role of experiences in evolution.

I have one suggestion that may perhaps help the author to clarify his thoughts, and end this review with a critical remark. Kant's ideas are important for understanding what is wrong with the ideas of Descartes and his followers. What requires some extra thinking is Kant's notion of a transcendental subject. Kant correctly argued against Descartes that conceptualized experiences are not self-ascribed to a separate, mental substance or self, yet he retained the Cartesian idea of the self-ascribability of conceptualized experience (or representations): my being conscious of experiences is self-ascribable to the transcendental subject. For, Kant argued, it must be possible for the subject of

experience to be conscious of experiences owned by him or her and, hence, to know that things are thus-or-so with him or her. Kant captured this by saying that it must be possible for the 'I can think' (or 'I can see') to accompany all experiences. If we attempt to extend Kant's ideas with evolutionary explanations, what, then, is the answer to a question that Kant did not answer: what is the transcendental subject? The critical remark is that Frauen ignores in his work neo-Aristotelian (or Wittgensteinian) substance monism extended with evolutionary theory as conceptual alternative for Cartesian substance dualism. I assume that he has good reasons, but if it is the result of mere unfamiliarity, then studying this alternative may perhaps help him to improve his ideas, for it offers an alternative to both Cartesian idealism and Kant's transcendental idealism.