

Vicious cycles and questions without answers

Urban Larsson
urban031@gmail.com

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The atoms are *questions*. A question can be opened or closed, by an agent. If the question is closed, then it has an *answer*, and we call it a *belief*. An agent's *nature* signals low utility, a *symptom*, if a question is closed, but their answer contradicts their own nature.

Theorem. If a symptom is misunderstood, then their nature informs, by signalling again low utility. Thus a 'vicious cycle', of reinforced low utility can be sustained. Proof. This is immediate, by the first paragraph.

A closed question can be opened again. If a question receives a contradictory answer, then it resists closing, so it takes sustained force to close it this way. This sustained force is what is perceived as low utility, and we call such a belief, a *forced belief*. So, nature is not distinct from the agent in any way. The act of opening a question does not take any effort at all; it is a release of force, from a forced belief to an open question, a yielding into the unknown.

The moment of discovery involves unraveling a paradox of 'not understanding' what was previously regarded as a given 'truth'; there is no inherent meaning in a signal of low utility, but to remind an agent that they may wish to open up a question, where it had been closed.

A common option is to instead (temporarily) remove a symptom of low utility by 'brute force'.¹ This is often nonpreferable, because nature's signal of misunderstanding of their own nature gets lost on the way, and a vicious cycle is reinforced.

But, by assumption, the agent's own nature is *friendly*,² and they will keep reminding if neglected, so there is always a new chance of learning—or should we rather say *unlearning* when the study concerns an 'escape' out of a vicious cycle? The forced belief, used to be an answer, but nature signals low utility, so the answer needs to be unlearned. But then, again this is *learning*, so either term fits well, depending the emphasis.

Corollary. If an agent obtains an answer to the details of a particular symptom, then this is inferior to maintaining the integrity of a larger whole. Proof. There is no answer to a particular symptom. So it can only lead to a forced belief, and therefore nature responds with low utility. On the other hand, there is no signal of low utility for maintaining a larger whole.

¹"Painkillers", "stretching-exercises", etc

²"Is the universe a friendly place?", A.E.