

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

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This is a thoughtful and stimulating essay with a number of valuable points that deserve to be presented for debate and discussion. I am sympathetic with the main thrust of the article, and agree with most of the author's major points. I will first identify those major points of agreement, then mention points that I don't necessarily consider wrong but would phrase differently, then discuss a few points of disagreement, and end by suggesting some corrections on minor points.

Areas of Agreement

The article nicely lays out the distinction between the subject (as subjective experience) and the object (as the external, objective world). It also introduces von Uexküll's term, "Umwelt," as a useful and clarifying concept.

I agree that humans are constructed by ideas as much as they are constructed by genes, and that a human being, therefore, is a hybrid of the nature and the nurture sides of being human. The notion that ideas are subjected to natural selection as genes are, makes sense.

Increasingly, neurobiologists are coming to view, in agreement with this article, that consciousness varies in both kind and extent along a continuum from an origin early in the history of animal evolution. The Cartesian notion of humans as the only organisms with consciousness is appropriately rejected.

It makes sense that the ability of organisms to act upon their environments increases with their awareness, understanding, and agency. The fact that agency can arise out of subjective origins is a sufficient reason to accept that subjective experience is not merely an epiphenomenon. And I also agree that subjective experience does not require the invocation of a mystical force of any kind.

Suggestions for alternative phrasing

In a scholarly article, excessive use of colloquial wording (signaled by quotation marks) should be avoided. Using colloquial or metaphorical language should be used sparingly, and only when the literal meaning of objective language is less clear and more intuitively understood metaphorically than literally. This stylistic stratagem is way overused in this essay. Just a few of many possible examples are the following:

p.2, line 4: "There is an external world . . ." *instead of* "There is a world 'out there' . . ."

p.3, line 9: ". . . loop from the objective outer world to the subjective self . . ." *instead of* ". . . loop from object ('outer world') to subject ('self')."

p.6, line 2: “. . . every idea. . .” *instead of* “. . . every ‘idea’ . . .”

p.10, line 14: “. . . going back to such an ancestral evolutionary level” *instead of* “. . . going down the ‘evolutionary ladder’ so far . . .”

p.11, line 5: “Accordingly, the first instance of sensation enters the world.” *instead of* “Accordingly, a ‘first sense’ enters the world.” (assuming this is what the author meant; if not, the term is unclear.)

p.23, line 13: “The **ability** of organisms . . .” *instead of* “The ‘freedom’ of organisms. . .”

In some cases, what is even meant by the metaphorical substitution is unclear, as in:

p.3, line 13: “Subjective experience of the outer world in animation ‘moves towards’ more encompassing semiotic representations of the elements that surround the organism in its environment.” *What does ‘moves towards’ actually mean in this context?*

Other cases of lack of clarity include the following:

p.5, line 14: “. . . uniting one’s self with what one is not into entity.”

p.9, line 8: “. . . the sphere of symbolic communication acts that is turning into a world-wide web with globalization, they compete with each other over the ‘resource’ human hosts, sort of speak.”

p.10, line 6: “As such, it signifies all that appears to an observer as it appears to this observer.” *Who is ‘this observer’?*

Neither “super-agent” nor “strong emergence” are clearly defined anywhere. Placing them in quotes alone is not enlightening.

p.15, Sect. 4: “To analyze how ‘ideas’ and the ‘social systems’ build upon them create dynamics in the evolutionary process is a valid description.”

Once “Umwelt” has been introduced and attributed to von Uexküll, it doesn’t need to be enclosed in quotation marks thereafter.

p.18, line 6: The term ‘primitive vertebrate’ is a poor choice of words. Is a frog more ‘primitive’ than a human because it evolved before humans, has a smaller brain, eats insects, or can’t throw a baseball? Most biologists avoid designating any organism as ‘primitive’ to any other, because a more specific and informative difference can usually be pointed to. In the present instance, for example, does the author mean anamniotes (fishes and amphibians) compared to amniotes (reptiles, birds, and mammals), or all vertebrates other than humans?

Finally, I have no idea what the title means. Surely, a more informative title can be devised.

Points of disagreement

p.12, line 4: “. . . we know that the cell has awareness of the outside.” The point has some validity, but I disagree with the contention that whenever semiotic signals from outside the organism are realized internally that an awareness of them is subjectively experienced. The cell can receive information about the outside and execute a response to it, without having any awareness in the sense of subjective experience. A light bulb turns on in response to a surge of electrical current initiated by an outside event, presumably without having an awareness of the outside or the event that caused it to light up. For this reason, I think it is a misuse of language to claim that the internal reaction of a cell to signaling from the outside is sufficient to imply cellular subjectivity, hence awareness, hence consciousness. And since I reject the notion of subjectivity at the cellular level, I don't think it makes sense to argue that higher-order subjectivity emerges from trillions of lower-order subjectivities. This implies that higher-order subjectivities are the sum of lower order subjectivities. Indeed, the author makes this point in footnote 3 by noting that an understanding of quantum mechanics is an emergent ability of the whole organism, not a sum of abilities by its individual cells.

p.18, line 13; repeated on p.24, line 3: I agree that it would be best to reserve the problematic term 'consciousness' for something other than internal agency in response to outside signaling, but not for “seeing the world as it is.” I don't believe the gap between subjectivity and objectivity can ever be fully closed. (Perhaps this is what the author will argue in a forthcoming essay.) As long as sentient beings specialize in sensing those types of information (sound, light, touch, etc.) most critical to their survival to the exclusion of those less relevant, even though the object gives rise to a much broader range of sensations, the subject will never have a complete understanding of what the object is really like. The author's use of the term 'awareness' for subjective knowledge of the object, to my mind is correct, but I think 'consciousness' should be reserved for a form of awareness that draws upon memory, anticipates consequences, and is manifested in imagery, thinking, and dreaming, as well as waking perception. The distinction between 'consciousness' and 'awareness' is interesting and debatable, so I don't insist that my view is more correct than that of the author. I simply urge the author to be as clear and precise as possible in discussing this issue.

To my mind, the entirety of Section 4, “Urge,” lacks utility or added value to this essay. Since the author apparently intends it to be a focal point of the third projected article in this series, he must have in mind an unconventional concept that has some value outside the usual use of the term. The Merriam-Webster Dictionary defines 'urge' (when used as a noun) as “a force or . . . impulse toward a continuing goal”; and 'impulse' is defined as “a sudden spontaneous inclination or incitement to some usually unpremeditated action.” Those definitions, which most readers would readily agree with, don't mesh very well with the author's contention that 'urge' and 'awareness and agency' are essentially the same (p.12, line 15). To the extent that the activities of any living cell or collection of cells is goal-directed, it is toward staying alive, but the language of natural selection has no need to proclaim that staying alive is a goal rather than a consequence of its activities. The activities of most whole organisms with a central nervous system can be said to have urges, but those urges are to stay alive and procreate. Single cells, whether living independently or part of a collective, are impelled to stay alive and reproduce because natural selection has fashioned them to do so, but to say that they have the urge to do so is, in my view, another misappropriation of language. The term 'urge' in common parlance is associated with psychologically-laden terms like drive, desire, impulse, motivation, etc. If what the author really has in mind is a more biologically neutral and non-Lamarckian meaning like 'tendency', 'trend', 'need' or (explicitly) 'survival', those terms should

be used instead of 'urge'. On the chance that I badly misunderstand the author's point, I am willing to suspend judgment until the third article is written to fully flush out what the author precisely intends, but in the meantime I would urge a rewriting of this Section 4 in a way that sounds less teleological, unless the author believes that life is teleological in nature.

Minor corrections

p.6, line 1: "... unique**extent**", *not* "... unique extend"

Footnote ⁶: "... very different**from**..." *not* "... very different to"

p.9, line 34: "... **so to** speak", *not* "... sort of speak"

p.17, line 12: "... to the degree that they**have** lost the ability to survive ..."

Generally speaking, wherever the author writes "It was displayed ..." would sound better to be stated as "It was argued ...".

Care should be taken to replace "build" with "built" whenever the past tense is indicated.