**Swampman, Teleosemantics, and Natural Kinds**

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1. Teleosemantics explains representation in terms of biological functions (and biological functions in terms of histories of natural selection).

A state R leads its consumer to perform behaviour B that fulfils its biological function E *if C*; the producer of R thus has the biological function of producing R *when C*. (In short, R has been designed to stand proxy for C.)

The producer and consumer can be distinct animals, as with vervet monkeys, or subsystems of one animal, as when your visual system informs your actions.

The relevant biological purpose needn’t always be survival and reproduction. Biological systems decompose into subsystems each with their own more specific functions. (For example, catching flying insects, satisfying human desires, producing representations of 3-D form.)

Nor need the natural selection responsible for these functions be intergenerational selection of genes.

2. Still, why bring in *past histories* of natural selection at all? If it’s helpful to see R as standing proxy for C in helping agents to choose B in pursuit of some ‘end’ E, who cares whether this is a matter of historical biological design?

‘Success semantics’ analyses representation in terms of conditions C required for behaviours B prompted by R to succeed in producing ends E—but without demanding that these structures result from past selection.

3. ‘Swampman’ drives the question home. A perfect replica of you coagulates by quantum chances in a steamy tropical swamp. Intuitively it seems that swampman can mentally represent many of the same things as you. Yet swampman lacks any selectional history. A counter-example to teleosemantics?

(To be honest, I don’t care *that* much about building evolutionary history into representation. I’m much more committed to the analysis common to teleosemantics and success semantics. Still surely it ought to possible to argue that *having a designer* is essential to the kind *watch* . . . And moreover the question raises issues of independent interest about kinds, essences, and rigid designation.)

4. The simplest teleosemantic answer to swampman is to override the intuition. Just as science can show us whales aren’t fish, it can show us swampman doesn’t represent. (Millikan, Neander, Papineau *Mind and Language* 1996.) We’ll do well to recognize our intuitions are a bad guide to true representation.

5. But is this enough? Would it be all right to kill swampman for food? (Eilert Sundt-Ohlsen.) (You might think we shouldn’t mistreat swampman because he would feel pain. But Sundt-Ohlsen persisted. Why do we non-vegetarian eat cows? We non-vegetarians say it’s ok to kill cows quickly, even though they feel pain, because they have no plans for the future . . . oh.)

6. Here’s a more nuanced teleosemantic response (Papineau ‘The Status of Teleosemantics, or How to Stop Worrying about Swampman’ *Aust J Phil* 2001).

There’s nothing wrong with our intuitions about representation. We all have a folk *conception* of representation (along the lines of some consumer treats R as standing proxy for C . . .) and in the actual world this conception picks out states which have been designed by evolution to play this role. If a different world were actual, with lots of swamporganisms, the same conception might pick out a different kind of state. Still, in this world the a posteriori *essence* of representation is historical design.

We care about the folk criteria, rather than the actual-worldly referent, which is why we wouldn’t eat swampmen if they were actual, but even so swampmen don’t really represent, since they lack the essential requirements.

It’s like water, H2O and XYZ. Our folk criteria are odourless, colourless, potable, but the nature is H2O. We care about the folk criteria—odourless, colourless, potable XYZ would satisfy our thirst ok—but XYZ would still lack the essential requirement for water.

So teleosemantics is no more discredited by a merely possible swampman than chemistry is discredited by a possible world where XYZ is the odourless, colourless, potable liquid.

7. Peter Schulte (‘Why Mental Content is not Like Water’ *Synthese* 2018) objects to the analogy. He says that it’s not enough for E to be the essence of folk kind K that we have a true a posteriori equation *the entities which satisfy folk criteria K = the entities which E*. (States that satisfy the folk criteria for representation = states that happen to have resulted from natural selection.) In addition, E must *explain* the criteria by which we recognize K. (The liquid that’s odourless, colourless . . . = the liquid made of H20.) The folk properties of *water* are explained by *H2O*. But the folk properties of *representation* aren’t similarly explained by *historically selected to guide behaviour*.

8. I agree with Schulte’s premise but not his conclusion.

Let us say a *Kind* is any category whose instances share *many* properties. So chemical substances, biological taxa . . . are Kinds. For any Kind, we can expect the instances to have one property that explains why they share so many other properties. It’s natural to think of this super-explanatory property as the *essence* of the Kind. In the case of chemical substances, this will be their molecular structure.

So far I’m in accord with Schulte. Where he goes wrong, though, is in assuming essences have to be intrinsic.

With biological species, if you ask me, the essence is common ancestry, not anything internal. (In Millikan’s terminology, they are ‘historical’ not ‘eternal’ kinds.)

9. And then there are *functional* kinds. Consider *aerial insectivores* (swallows, martins, bats, dragonflies, . . .) They all share a range of properties (swooping ability, acute senses, large mouths). But here the super-explanatory essence isn’t some intrinsic property or common ancestry, but simply that they have been designed by the *same selectional pressures*.

10. I say that representation is a similar functional kind. Instances of representational systems share a range of features: a consumer that treats some internal R as proxy for some C in prompting response B; a producer that gears R to the presence of C; and moreover does this robustly across different peripheral stimuli; and typically produces a range of Rs each with its own appropriate B; and are often realised by sub-systems that produce intermediary representations; with learning fine-tuning the sensitivity of producer and consumer; . . .

What explains the shared features of such systems is their common selective provenance. They have all been designed to optimally enable organisms to gear their behaviour to distal circumstances C.

11. So a certain kind of selectional history is the essence of representation after all, just as H2O is the essence of water. And so, as I said, teleosemantics is no more discredited by a merely possible swampman than chemistry is discredited by a merely possible odourless, colourless, potable XYZ.

12. In my original paper I was worried that my position hinged on the contentious semantic thesis that ‘belief’/’representation’ are *rigid designators* for kind *essences*, so I backed off that thesis, and said that all I really cared about was that selectional states realised the folk role in the actual world, and I was prepared to concede that our concepts of *belief/representation* might behave ‘flaccidly’ and so deem swampman to be a real representer after all. *Mistake.* David Braddon-Mitchell and Frank Jackson (‘A Phyrric Victory for Teleonomy’ *Aust J Phil* 20012002) rightly objected that my position was then no different from analytic functionalism.

13. I shouldn’t have been so cagey about ‘belief’/’representation’ being rigid designators for kind essences. In truth, if these are *names* of kinds, then they are per se rigid.

What about the idea that they name *essences*? Well, that’s just the issue about *which* property/relation they name. It’s not that certain properties *of* kinds are essential to the *kinds*. Rather it’s that eg Nec(x)(Rep(x) 🡪 Sel(x)) and Nec(x)(Sel(x)🡪Rep(x))—that is, the property of *representing* is one and the same as *selected to stand proxy for.* Don’t think of essences as some extra item to be referred to—it’s rather that the special super-explanatory role of a certain property means it is modally necessary and sufficient for kind membership, and thus that’s what the kind *is*.

So there’s no two ways about it. Even in other possible worlds, swampman definitely would not *believe* or *represent,* even though he’s superficially like those of us who do.