

Encultured minds, not error reduction minds

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Abstract

There are serious theoretical problems with the free-energy principle model, which are shown in the current article. We discuss the proposed model's inability to account for culturally emergent normativities, and point out the foundational issues that we claim this inability stems from.

We believe the free-energy principle (FEP) lacks theoretical resources to account for the complex phenomenon of culture. The current article's attempt at doing so results in a trivialization of the problem, and a reductionist view on what culture and its participants are. Below we focus on the problems the proposal faces with accounting for the diverse normativities that characterize encultured persons. After that, we argue that this is a symptom of more fundamental theoretical problems with the FEP.

The FEP claims that the overarching goal of every individual is to reduce free energy or uncertainty. Accordingly, all normativities that the system instantiates are claimed to come from the pre-selected set of “expectations”; for instance, living organisms are argued to move away from dangerous temperatures because these temperatures generate inputs incompatible with “expectations”

about them (this is the example given in the current article). These adaptive “expectations” are argued to reside in the highest level “expectations,” sometimes called hyperpriors (Clark 2013a), which have been formed during phylogeny; only those individuals with adaptive hyperprior “expectations” managed to survive and procreate (Friston et al. 2012; Kiebel et al. 2008).

Although a rather ingenious idea, the above claim runs into clear problems in the context of enculturation. People certainly have phylogenetically old normativities such as the ones satisfying our basic survival needs, but they also house a whole plethora of normativities emergent over the course of development, ones that cannot be argued to have formed in phylogeny. It hardly needs demonstration that genetically identical and raised in the same socio-cultural milieu twins can develop radically opposing sets of values and goals. What is more, these goals and values can sometimes override the phylogenetically old, adaptive normativities: history knows many cases of people deciding to die or suffer for some highly abstract cause. This fact seems entirely incompatible with the FEP model, and it is especially problematic in the context of the current proposal because these powerful, novel normativities usually emerge as part of the process of enculturation. In fact, encultured persons *are constituted* by such emergent normative phenomena: We certainly can identify more with our values and goals than with our biologically given motivation to stay alive, which itself is far from defined innately as it emerges ontogenetically in a social context too (e.g., we learn the “proper” ways of eating or sleeping from our cultures) (see Eck & Levine 2017).

In the context of the multi-layered human cognitive system, the highest-level, adaptive normativities given in hyperpriors are argued to yield information-seeking or global-uncertainty-reduction dynamics. This is held up in the current article as solving the “dark-room problem”: increases in local uncertainty are expected to decrease global uncertainty over time, that is, to keep the organism within the innately expected states specified in the hyperpriors. This claim seems to give us another kind of normativity that is derived from the overarching motivation of the FEP: namely, the epistemic-gain motivation. Unfortunately, this does little to help the situation as motivations emergent in encultured persons cannot be reduced to information seeking either. How does my re-watching for a hundredth time an old cult movie at my house benefit me epistemically? In fact, culturally emergent normativities are sometimes flatly hostile to epistemic gain – ignorance passes for cool in some communities.

These issues of the FEP being incompatible with the reality of culturally emergent normativities bear heavy on the proposed model. Although the paper talks about relevant phenomena – such as norms, affect, or prestige – as if they have been explained (there are many such glaring cases of *petitio principii* in the article), the proposed model hinges solely on the epistemic-gain motivation. Culture boils down to informational redundancies created for a more efficient epistemic gain (cultural niche construction) and individuals learning about these redundancies (learning cultural affordances). There are no persons with their ontologically novel normativities, such as values, ideals, and other diverse motivations – just individual organisms helping each other minimize their free energy (for an analysis of the problem of such “manipulationist” views on culture in other models, see Eck 2015).

It becomes clear that the predictive processing framework and the FEP are not fit for modeling culture. Following Litwin and Miłkowski (submitted), we believe that the framework needs serious theoretical development before it can be fruitfully applied to specific problems such as the one at hand. Indeed, the inability to model normative emergence in enculturation is an important

special case of a more general problem: Free energy cannot handle *any* normative phenomena per se – neither the ones involved in enculturation nor the ones involved in development in general, not even the basic normativities inherent in life (Bickhard 2015; 2016; Martyushev 2018; Roesch et al. 2012). At best, pre-programmed hyperpriors can extensionally capture predetermined behavior patterns. Any exceptions (e.g., seeking dark, instead of turning on the light; seeking pain [e.g., hot peppers] instead of avoiding it; etc.) must also be pre-programmed: there is no modifying the hyperprior probabilities (they are innate, as are *all* of the *spaces* over which *all* of the probabilities are distributed) – there is no normative learning, no development, no socialization, and no enculturation, the last of which we discussed in this commentary. For a related discussion of problems with such foundationalism in cross-cultural research, see Mirski and Gut (2018). For an anticipatory framework that does address issues of normativity, see, for example, Bickhard (2009) and Campbell (2015) – including in the context of culture and language (e.g., Bickhard 1992; 2007; 2008).

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