

High on the Hog: What is Higher Order in the Higher Order Global States (HOGS)

Approach to Consciousness?

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Abstract

Robert Van Gulick has developed, as a new option in the dialectic between First Order Representationalist and Higher Order Theories of consciousness (either HOP or HOT) a view that explains consciousness in terms of higher order *global* states (HOGS). The HOGS approach takes the distinction between lower order and higher order states to be a matter of degree, not of kind. A lower order state is integrated into a more global representation. This paper considers two interpretations of HOGS theory, a reductionist and non-reductionist interpretation. It is argued that while, in one sense, the language of “levels” is an interpretative artefact, it is an indispensable fiction in theorising about consciousness. Van Gulick plausibly specifies various cognitive tasks that are only discharged at his “higher order” level; this paper focuses not on the (lower order) informational basis from which the concepts deployed are extracted, but on the (higher order) resources that the system has to have in order to extract them.

Take a simple example of a conscious judgement:

Rebekah consciously sees a lion at Antwerp zoo.

What features does it have? All parties to the debate agree on the following: there is a person, Rebekah, to whom something is intentionally represented, but in a *way* that makes it a conscious representation: something is represented *for* Rebekah. And, at that point, the

agreement collapses into a multiplicity of competing views. To begin to broach some of these issues: how much complexity was hidden in the original claim?

The phenomenologist argues: a great deal. Rebekah is, in some way, both aware of the lion and *aware that she is so aware*. [Zahavi, 1999, 2004, 2005] Conscious experience involves a reflexive self-awareness embedded in that which seemed to be a simple judgement with no internal structure. (None, that is, other than a relation between a person and a proposition.) Two further points of division emerge internally to this tradition over whether or not this implicit self-awareness is itself a matter of representation, or something more like a direct acquaintance that is not propositional. [Lurz, 2003] Secondly, there is a dispute within this tradition over the self thus represented: it is experientially known or is it a “merely formal” notion of the self? [Zahavi, 2004]

The first divide between those in the phenomenological tradition who think that the self-awareness within consciousness is propositional or, by contrast, a matter of acquaintance, can be approached in another way. Everyone in this tradition is committed to this very general claim: if consciousness does involve implicit self-awareness, and this is a matter of representation, then states we are conscious *with* are states we are conscious *of*. You can now explain the split within the tradition in this way: those who think implicit awareness is a matter of acquaintance divide the way in which we are aware of the world (“conscious with”) from how they are implicitly “known” (“conscious of”). [Lurz, 2003] The former is a matter of first order intentional representation, but the latter is a matter of implicit acquaintance that is non-conceptual and object directed.

By contrast, those in the self-representational tradition treat both the conscious states with which we are aware of the world and the conscious states of which we are aware,

in exactly the same (representational) way. Furthermore, self-representationalists think that one of those roles does not pre-empt the other: to be in a state that you are conscious with *is* to be in a state that you are conscious of. One and the same state discharges both roles at the same time. [Brook and Raymond, n.d.; Kriegel and Williford, 2006]

So both strands within the phenomenological tradition believe that the mental states we are conscious with are mental states that we are conscious of. This gives the view strange bedfellows: notably, this foundational assumption is shared with higher order theory in all three of its variations.

Higher order theory also starts from the principle that thoughts we are conscious with are thoughts we are conscious of. (David Rosenthal's foundational assumption is that: "A mental state is conscious only if one is *in some way aware* of it". [Rosenthal, 2006]) Like the self-representationalist, the higher order theorist thinks that two thoughts/perceptions are involved, but for higher order views they are not self-identical. They are distinct: a first order thought is made conscious by another thought, of a higher order, that may not itself be conscious. If you think that the higher order thought is, indeed, an intentional representation, then the result is higher order thought theory. [Rosenthal, 1986, 1993a, 1993b, 1993c, 1997, 2004a, 2004b] (That theory comes in two forms, depending on whether the higher order thought is actual (Rosenthal) or dispositional (Carruthers). [Carruthers, 2000]) By contrast, if you think that the higher order "thought" is actually an inner analogue of perception, then you have the classic introspectionist model of the tradition (Locke) and recent HOP theory (Lycan). [Lycan, 1987, 1996]

One advantage of this entire higher order tradition is that dispenses with the idea of a hidden reflexivity within the structure of individual thoughts characteristic of the

phenomenological tradition. For example, the complex *de se* representations of the HOT theorists are not self-referential. [Contrast Zahavi and Parnas, 1998 with Rosenthal, 2003] This view, however, can also involve a scepticism about two connected aspects of our conscious experience: that it is representation for a self, or that consciousness is in any way unified. [Rosenthal, 2003] At that point it is not clear that the view can explain all that we would like explained, a point to which I will return.

A radical break with all of these approaches is a first order representationalist theory of the kind proposed by Fred Dretske. [1995] Following an orthodox usage in psychology, Dretske identifies consciousness with first order intentional *awareness*. In so doing, he rejects the claim that mental states we are conscious with are states we are conscious of. In some cases of intentional awareness we are simply aware of – absorbed in – the object of consciousness awareness:

Conscious mental states – experiences, in particular – are states that we are conscious with, not that we are conscious of. They are states that make us conscious not states that we make conscious by being conscious of them. They are states that enable us to see, hear, and feel not states that we see, hear or feel. [Dretske 1995 100-101]

This radical Dretskean view can seem puzzling. After all, we were already familiar with the idea of a first order intentional representation: it is an idea that seems to have a far wider scope than the idea of conscious thought. Thoughts in our sub-conscious, for example, are complex intentional representations. On what basis do we label some of these mental representations conscious and others not? That is one puzzle; others follow. The rival views found a great deal of hidden complexity in the original simple judgement. Dretske keeps the simplicity; but what happens now to self-awareness, of the sense that Rebekah was

made aware not merely of the lion at the zoo, but also *that she was so aware*? There seems a great deal that Dretske's view does not even attempt to explain including this fact that conscious states seem represented from a unitary point of view. All that one can say within the scope of a first order representationalist theory is that some of our intentional representations make us aware of other things while others do not. Even if explanation has to stop somewhere, that seems to be much less than we hoped for from a theory of consciousness.

So a provisional assessment of this plethora of theories (and acronyms) might be that the phenomenological view does well at describing our intuitions, but its appeal to inherent reflexivity or implicit self-awareness seem obscure and in need of further explanation. Higher order (actualist) thought theory looks like a promising account, but there seems little prospect of its explaining other features of consciousness, such as its unity. Self-representationalism looks very promising if we can somehow cash out the idea that conscious states do represent themselves. Dretske captures the diametrically opposed intuition that some ways of being aware simply are conscious ways with no other thoughts involved, but here, too, implicit reference to a unified self seems to fall outside the parameters of the theory. Each of these views seems to capture part, but not all, of that which we wanted to explain. Can any other view do better?

I

In this paper I am going to focus on three, closely related, theories that begin with Dretske's pared down account, but put some of the necessary complexity back into it so as to generate a wider range of explanations. However, the way in which they put the complexity back in

is instructive: for all three views, that which is misleading about the original judgement is its *atomistic* character.

The intuition which was our starting point seems to involve this thought: it is an atomistically conceived state of Rebekah, a state that she “occupies”, at a time, which places her in the “conscious making” relation to the object of her thought. However, all three of the views I will discuss take this appearance to be misleading. The individual state that Rebekah is “in” tacitly draws on the characteristic features of an entire system of states. Only a representation thus embedded could demarcate conscious from non-conscious states. In particular, when the higher order thought theorist found a relation hidden in this first order judgement, she was on the right track. However, the language of “orders” is misleading. Consciousness does not involve a relation between two orders or levels of representation, but a relation between a *more local* and a *more global* system of representations. That which seemed to be a difference of kind is, in fact, a difference of degree. The idea of a distinction of levels is an interpretative artefact of how we ascribe conscious states. Similarly, the self-representationalist was on the right track, but she needs to drop any implication of atomism at least for the “higher order” part of her view. That which is represented, and that to which it is represented, are really related as part to whole. The former may be an atom, but the latter is not.

This rejection of atomism is proposed by the adverbialist about consciousness, by Robert Van Gulick in his higher order global states theory, and by Andrew Brook and Paul Raymont in their Unified Theory of Consciousness. Given that Brook and Raymont’s theory is as yet unpublished, I will focus here on Van Gulick’s HOGS theory.¹ [Van Gulick, 2001, 2004, 2006] I have defended adverbialism elsewhere and I will defer consideration

of the relation between that view and HOGS theory for another occasion. [Thomas, 2003b, 2006, 2008]

My particular focus will be this: if HOGS theory is correct to claim that the distinction between higher order and lower order is one of degree, is this a path to dispensing with the distinction between higher and lower orders entirely? HOGS theory suggests a reductionist interpretation of consciousness to another level of description that appeals wholly to sub-personal information and *its* characteristic processes. In this paper I will argue that preserving the language of levels is a non-optional part of the theory. Drawing a distinction between two ways in which a mental state is “given” to consciousness demonstrates that there are aspects of the global state that cannot be given an explanation in terms of lower order states. I have used the phrase “interpretative artefact” to describe how Van Gulick can distinguish higher and lower levels of mentality; if this is an artefact (or fiction) then it is one that we cannot live without.

II

Van Gulick’s higher order global states theory drops the requirement that the two “states” appealed to in the explanation of consciousness be wholly distinct (as they are, for example, in Rosenthal’s actualist HOT theory). [Van Gulick, 2001, 2004, 2006] For the HOGS theorist, a conscious mental subject is such that she can integrate states of a lower order into an all-encompassing global state. This process of integration suggests the kinds of metaphor of “higher” and “lower” order does not carve psychological nature at its joints.

What advantages does this view promise over its rivals? Van Gulick describes three: first, it constitutes one way of interpreting Dennett’s “multiple drafts” model of

consciousness. [Dennett, 1991] Secondly, it incorporates Christopher Hill's emphasis on the "active" nature of introspection. [Hill, 1991, 2000] Finally, HOGS theory acknowledges the globally distributed nature of the neural correlate of consciousness. Van Gulick sums up his approach as follows:

Its basic idea is that transforming a nonconscious state into a conscious one is a process of recruiting it into a globally integrated complex whose organization and intentional content embodies a heightened degree of reflexive self-awareness. The meta-intentional content is carried not by a distinct and separate vehicle but rather by a complex global state that includes the object state as component. [Van Gulick, 2004, p. 77]

In this passage by "meta-intentional content" Van Gulick means the content that Rosenthal interprets as a higher order thought. If, as this passage makes clear, this content is not "carried" by a separate thought why is this still a *higher order* theory?

In one sense it clearly is not: interpretation in terms of "orders" is a product of how we interpret the embedding of a more informationally restricted (local) into a less informationally restricted (global) state.² That is because Van Gulick believes that this process of incorporation, in which a mental state is integrated into a wider systemic role, changes its content by supplementing it. The influence is reciprocal: "the various components...both amplify and modify each other" in a way that reflects the active nature of introspective attention. Nothing less than the *more* global pattern could suffice to represent the "sequence of states of a self-consciously experiencing subject". [Van Gulick, 2001] The picture is dynamic and interactive: it is by being taken up and integrated that individual states exhibit those features that figure prominently in the phenomenologist's description of them.

The change in the “lower order” state brought about via this integration is the availability, after the process, of a perspectively oriented mode of thinking that uses the “I” concept or other indexicals. (This both introduces – and satisfies – Nagel’s requirement that there be “something it is like to be” in the relevant state. [Nagel, 1974]) Now we have representation for a self and the qualitative aspect of experience. That which is “higher order” is the more encompassing state that transforms the content implicitly present in the original representation. We are to see the process of integration as transforming something implicit in the first order state into an explicit aspect of its content. As in Hill’s active model of introspection, incorporation changes the state that is embedded. Hill took himself to be enriching the higher order perception theorist’s account of introspection: he believes that it is not passive, but an expression of our inner agency. Van Gulick puts that thought to a different use in a novel context: the incorporation of the more local into the more global state changes both: there is reciprocal “activity”. However, there is a sense in which that is the exploitation of existing features of the state such that we can take it have been “limitedly” and “implicitly” self-referential all along.

This puts Van Gulick in a position to capture the intuitions motivating the phenomenological view that conscious mental states are implicitly self-aware:

Self-awareness in at least an implicit form is a basic feature of the structure of phenomenal experience. The empirical reality of “world over against self” or of “self confronting world” is, as Kant (1781) showed us two centuries ago, built into the very structure and organization of experience. It is in that sense that the transformation of a nonconscious state into a conscious one essentially involves or depends upon the addition or enhancement of self-awareness. [Van Gulick, 2001]

Van Gulick notes that he avoids some of the major problems facing existing versions of higher order theory including constraining the relation between higher and lower order states³; furthermore he has explained the nature of qualitative awareness⁴; finally, he has solved Dretske's "generality problem".

Van Gulick, like Brook and Raymont, have been influenced by Dennett's "multiple drafts" model for consciousness:

We might take a cue here from Dennett's hypothesis about the virtual structure of the self as implicit in the intentional perspectival structure of the serial narrative. What makes a system of representational states into a self (or perhaps it would be better to say more self-like) is largely a matter of the intentional coherence and causal unity that binds the elements of the system together...recruiting a nonconscious state into the global pattern is a way of integrating it into the coherent structure of the conscious self. Given the implicitly self-reflexive nature of phenomenal representation, the very act of integrating the recruited state into the global unity necessarily embeds it within a more self-aware structure. There need be no further discrete explicit higher-order representation to produce self-awareness as there is on the HOP and HOT models. *The very act of integration itself suffices.* [Van Gulick, emphasis added]

That last sentence captures the essence of HOGS theory: what looked like a hierarchical distinction of levels can be captured "horizontally" in terms of the integration of one state into a more global state. Greater integration is heightened self-awareness.

This is certainly a view that, if true, gives us more complete explanations from a less committal starting point than its rivals. Starting from a simple first order representationalism, HOGS theory explains the active transformation of that first order state into a more global representation. It also captures some of the distinctive claims of the phenomenological tradition. Furthermore, it introduces the key elements that seemed

missing from the Dretskean account: reference to the self *for whom* these are representations.

At this point I think it is helpful to introduce a distinction that Brook and Raymont make between a “cognitive system” and a “subject of cognitive life”:

Subjects of cognitive life are cognitive systems; but it is at the very least not obvious that reverse need be the case. Indeed, on certain pictures of consciousness, a cognitive system need *not* be a subject in this sense. If states were conscious or even representational intrinsically...then a cognitive system that had them would not have to be a subject. [Brook and Raymont, unpublished ms, chapter one]

Like Brook and Raymont, Van Gulick believes that thinkers like us are not merely cognitive systems, but also “subjects of cognitive life”. This explains why he believes there is still independent explanatory force to the higher order theorist’s language of “levels”. One explanandum that he explains which Dretske simply does not address is the fact of conscious unity at the level of the subject, or person.

That which substantiates Van Gulick’s continuing appeal to the metaphors of higher and order levels is the unity of consciousness. Strictly speaking, it is required by two kinds of unity relevant to consciousness: “*the unity of the experienced world* and *the unity of the experiencing self*”. [Van Gulick, 2004, p. 81] Self and world are “given” together: a unified self is correlated with the objective world grasped from the perspectival point of view afforded by the former. Van Gulick is very clear that he does not mean “perspective” here literally. As he uses the metaphor it is not restricted to the spatio-temporal occupant of where the conscious subject is physically located: objects are “precipitated” out the world

for a “single point of view”. [Van Gulick, p. 83] I will return to the importance of this explanandum later in this paper.

II

The question I would like to raise about Van Gulick’s account is whether or not it is reductionist. By a reductionist interpretation of HOGS theory I mean a version of the view that emphasises that we are dealing here merely with two organised sets of representations divided into the “more local” and the “more global”. One tempting gloss on this claim would be that we have successfully reduced consciousness to representation. Perhaps, indeed, the HOGS theorist should go the whole hog and claim to be a first order representationalist.⁵ If we can then explain representation in informational terms, then this first order representationalism can be reduced to an explanation that mentions only sub-personal information. The line between the conscious and the non-conscious is both a matter of the higher and the lower, a binary contrast, and the more and the less, a scalar contrast. However, the former can be reduced to the latter.

Van Gulick’s view is a particularly rich and suggestive contribution to the recent debate and I do not think that my question as to whether his view is reductionist necessarily has a “yes or no” answer. There are different components of the overall view that suggest both a reductionist and a non-reductionist interpretation of HOGS theory. I will describe them before giving some reasons which I think are decisive for preferring the non-reductionist interpretation. I will then suggest a friendly revision to the view that makes it even more clearly non-reductionist.

The main strand of the view that suggests reductionism is that the very idea of the “orders” of consciousness is a matter of degree. Just as Dennett talks of breadth of impact, so Van Gulick takes there to be simply a difference of degree between the recruited and the recruiting (global, or rather, *more* global) state. To put my concern succinctly, when he claims that greater integration is also enhanced self-awareness, is that claim simply stipulated? After all, there are all kinds of information carrying processes going on in a psychological subject. Is any case of enhanced integration identical to an enhanced form of self-awareness? I do not think that, in fact, Van Gulick’s account can be so promiscuous.

To make the case for this second, non-reductionist, interpretation of HOGS theory my starting point is what is meant in this discussion by the “givenness” of consciousness to itself. Van Gulick claims that HOGS theory captures what the phenomenologist meant by this obscure phrase, but in a way that avoids the claim the conscious states are “implicitly self-aware”. As Pessi Lyyra has pointed out, this is a fruitful strategy that the first order theorist can pursue in order to accommodate the intuition of “implicit self-awareness”. [Lyyra, 2008]

That phrase is a gloss on the claim that consciousness is “given” to itself, but “givenness” is an ambivalent idea. Lyyra makes the case that, both in the development of the individual and as the basic account of the nature of conscious experience, there is no sense in which the mind is “actually” given to itself in the form of an inner directed awareness, either propositionally or by direct acquaintance. That leaves, however, the idea of “givenness” as a dispositional availability:

When it comes to mental states, we can only be conscious of those mental states that are somehow available to us. But something can be given or present even when we fail to be aware of it. The same goes for mental states.....The point can also be formulated in information-theoretic terms....consciousness and its intentional object carry information about consciousness itself and the [appearance versus reality] distinction {Dretske 1981; Aydede and Güzeldere 2005}. Dretske treats consciousness as an information-using system. As such, it receives and seeks information-carrying signals and makes use of the signals by extracting pieces of the information for further purposes. An important property of every information-carrying signal is that there is no limit to the amount of information that it can carry. *Everything depends on the system's ability to extract the information from the signal.* A signal can carry information about the system itself. Consciousness carries information not only about objects but also about itself. Thus, if consciousness is able to extract information, it may come to learn about itself. Whether or not it has the capacity, the information is still available. Consciousness is always given or present to itself in this way. [Lyyra, 2008, p. 80, emphasis added]

An important consequence of Lyyra's distinction is the corollary that the information one can extract from a mental state depends not only its informational content, but also on the availability of the means of extracting it. [Lyyra, 2008, p. 80]

I think that point can usefully be applied to Van Gulick's proposal: that which the HOGS model presupposes in the incorporated state is not implicit self-awareness, as in the phenomenological tradition, but of an informational basis (whatever it is) *sufficiently rich* to allow integration into person-level consciousness characterised by the possession of a "point of view". Not just any informational basis for conscious experience will do; to use Brook and Raymond's distinction again, cognitive systems need not give rise (and in many cases do not give rise) to subjects of cognitive life, or selves. So now we need the right kind of candidate when we speak generally of information carrying, or representational, states. They must both be informationally rich enough to carry the information precipitated during the integrative process, and the global system must have the capacities and concepts needed to extract that information and make the "implicit" comparatively explicit.

This allows one to re-examine Van Gulick claim that talk of “levels” and “orders” of consciousness is a matter of degree. Appealing to Lyyra’s very helpful distinction allows one to identify an equivocation here: viewed solely in informational terms, van Gulick’s distinction between levels is a matter of degree. But the issue is not simply that of the embedding of one state in another, but the extraction of information from that state, and the capacities and concepts required to do so. It seems to me that to possess those concepts and capacities we are dealing here not with a more encompassing “state”, but with systemic features. It is quite clear, from van Gulick’s presentation, that those are available *only at the personal level*. This is clearest in his discussion of the qualitative aspect of phenomenal consciousness, where he takes a HOGS view to have an explanatory advantage over Rosenthal’s HOT theory precisely on this point:

On the HOGS model, the higher-order state has qualia, and indeed it alone has qualia in the form needed to produce an experiential what it’s likeness. The qualia are those that were present in the lower-order state since that state is preserved in a somewhat transformed way as a constituent of the global complex that realizes the conscious state with its added higher-order aspects. It is *only when* those qualia are incorporated via the larger state into the self-conscious experiential stream of the agent that there is anything that it’s like to be in the relevant state. [van Gulick, 2001 emphasis added]

This seems a different claim from the earlier claim that the process of integration constituted self-awareness; it now seems that self-awareness is an emergent feature of the global system *after* the process of integration has been completed.

This second point leads to a third. Again, using Brook and Raymont’s distinction between a cognitive system and a subject of consciousness, presumably many mental states, characterised in terms of their informational impact, are embedded in other states

with a more global impact. However, *more* global does not suffice to pick out the right kind of informational system.⁶ The kind of recruitment that Van Gulick has in mind clearly presupposes that the informational correlate of the conscious mind of a person is the *maximally global* state of a person viewed as a processor of information. That seems very plausible: it is only of the most global information processing system that one would be tempted to say that it was the informational substrate of consciousness. However, this seems to me to show that Van Gulick's HOGS theory presupposes, at the level of a functional (not informational) description of a system, an independent person-level theory of consciousness. It would follow that Dennett's "cerebral celebrity", which is indeed a matter of degree, cannot be that in which consciousness consists. It is a consequence of, or criterion for, consciousness.

There are passages in Van Gulick where the language of "more or less" informationally local/global states does seem to acknowledge that we have to be dealing here with the most global state:

To transform the processing and registration of visual information that had been unconscious...into conscious visual experience, we must embed the information carried by the recruited state into the integrated structure of the phenomenal self-world. The global states that constitute the transient realisations of the flow of consciousness *hang together and cohere at the level of phenomenal intentionality as experiential states jointly of world and self*: of self located in a world of objects present to it, and of a world of objects present from that self's perspective. [Van Gulick, 2004, p. 83, emphasis added]

I have highlighted part of this passage to make clear that in understanding the globalness of the global representation we can appeal only to the personal level of explanation at which

mental states receive their functional definition. Without appeal to this level we cannot even identify the relevant global representation.

As I have emphasised, I do not take myself to be criticising Van Gulick, merely exploring how reductionist his view could be. The answer seems to me: not reductionist at all. There is only one global system that can play the role he wants it to play in explaining consciousness. Following from the clue suggested by Van Gulick's metaphor of "reciprocity", we need two autonomous explanatory levels to see the system as suitably equipped with concepts and capacities to make the information carried by the lower order state explicit. Furthermore, that lower order state must be sufficiently informationally rich to allow those concepts to be extracted from it. This is neither a first order, nor a higher order, theory of consciousness. It is both, with the different levels or orders dynamically and reciprocally connected. There are relations of explanatory inter-dependence between Van Gulick's higher order and lower order level that do not permit reduction in either direction.

IV

Van Gulick wants to capture the intuition that motivates the phenomenological tradition: but does he concede too much to it? With the clarification I have suggested in the previous section – that integration has to be with the most global state of the subject – I think we can further argue that he *has* conceded too much. A key passage is this one:

The intentionality found at the phenomenal level...exists within [the] overarching structure of world and self. And it is that structure...that is the main source of the reflexive meta-intentionality associated with conscious states. It derives not from the addition of distinct, explicit self-ascriptive meta-states, but from the implicit self-

perspectuality that is built into the intentional structure of conscious experience itself.
[Van Gulick, 2004, p. 84]

This passage seems equivocal. It is true that higher order ascription does not constitute consciousness, but, I will argue, it does have a bearing on its unity. First order representations incorporated into a global state with dispositional features can feature in the unified conscious life characteristic of subjects of conscious life like us.⁷

But how much complexity must there be in the lower order state for this to be possible? The part of Van Gulick's view that I want to resist is the claim that if one represents an entire system of representations as "for a self", then that has to correspond to a structure latent within individual representations. Lyyra's distinction between "givenness" as actual or as potential makes that claim seem superfluous to HOGS theory. When Van Gulick uses phrases such as "the perspectival point that is built into the structure of experience itself" it is ambiguous whether "experience" here is understood as a token mental state or as referring back to the global representation. If the latter, then I do not disagree with him, but it is not clear why representation at that level (the level that immanently defines the self) need be foreshadowed by reflexive structure within each mental state. It seems to me that it would be an advantage of the HOGS view if it avoided that claim.

Van Gulick will protest: this revision to his account removes the element of reciprocity. On the proposed revised account selfhood emerges as a global, systemic aspect of the psychological subject and is not "anticipated" by any implicit structures within the mental state thus integrated. This starts to pull his theory in the direction of HOT theory, the variation being that the higher order state is a global representation. However, that

seems to me to be correct: all we can reasonably require is that the first order state be informationally rich enough to be represented as precipitating a first personal point of view. There need be nothing in the state that is, *even implicitly*, conceptualised as such.

In response to the envisaged protest from Van Gulick, I would make two points. The first is that we do not want to preserve the self-representationalist's intuition in any case – it is open to a damaging objection. As Brook and Raymont formulate this intuition, that which is distinctive of the phenomenological tradition is the denial of the pre-emption claim that if you are conscious with a state then you are not also conscious of it. Brook and Raymont give the example of a barcode: the barcode represents an object, it represents it for a system, and it represents itself. Barcodes contain an internal “integrity check” that reflexively applies to that very same barcode. As the word “check” implies, we can see the barcode as a “self-monitoring” state, in the sense defended for all conscious states by Uriah Kriegel. [Kriegel, 2011]

But now a counter-argument is presented by the higher-order thought theorist: the self-representationalist actually holds the same view as the higher order thought theorist, but the language of “orders” is re-interpreted in (another) novel way. If we can make sense of the idea of parts of mental states, then in a same order monitoring view one part of a mental state is monitoring another part and *thereby making the monitored part conscious*. [Rosenthal, 2006] Brook and Raymont insist that the three dimensions of representation in a self-representational state cannot be “pulled apart”, but Rosenthal points out that they very easily can. So same order monitoring is not an alternative to higher order thought theory, but a variant of it, so any problems for the first view are a problem for the second view, too. My conclusion is that we ought to reject both views together. This is a part of

the phenomenological approach that Van Gulick does not need to preserve in HOGS theory as it raises too many problems of its own.⁸

Again, my view is that the way forward here is to emphasise the explanatory interdependence of Van Gulick's higher order and lower order levels. A first order representation has to be sufficiently informationally complex to be capable of being integrated into a higher order global representation with the concepts and capacities to "read" the information in the lower order representation. Only with that condition met can it be integrated into the point of view of the conscious subject. The reason that a first order representation, taken alone, is insufficient for consciousness is because consciousness is essentially unified. The meta-mental dispositions available only at the global level explain not consciousness, but its distinctive unity. That is where a first order representationalist view like Dretske's is vulnerable but, as Michael Tye has argued, it is compatible with a view of this type to give an explanation of the unity of consciousness. [Tye, 2003]

I will return to this in the next section. Here I want to develop a point that I raised earlier for any first order Dretskean view. We already have the notion of first order representation; the idea of an intentional mental state has wider scope than that of conscious thought. Is this, on the Dretskean view, a brute fact that some representational mental states make us aware while others do not? I think we can at least say this: even if it is a brute fact, it has some correlates that give it some empirical purchase.

We can describe the psychological subject in at least three ways: in terms of capacities, in terms of representational mental states and in terms of information processing. We would expect representations that are the basis of conscious thought to be both informationally rich and involved in heightened activity at the level of the cognitive

system as a whole. [Brook and Raymont, chapter 1] The system will be bringing multiple capacities to bear on a single problem whether attentively tying a complex knot or solving a chess problem. So at the level of the informational correlate of a conscious representation, there will be sufficient complexity there to be exploited by the conscious thinker. This is the flipside of Lyyra's point: the "givenness" of consciousness complex resources at the level of the person to extract conceptual thinking from an informational state that must be informationally rich enough to carry that content (whether it is extracted or not).

IV

I have not, as yet, done anything to substantiate Brook and Raymont's distinction between a unified cognitive system and a single subject of cognitive life. Van Gulick does not draw such a distinction: he speaks of the two unities of an experienced world and a unified point of view. However, I share Brook and Raymont's sense that more needs to be said: they quote, uneasily, Dan Dennett's observation that anyone who uses the language of representation is committed to the homuncular fallacy unless the idea of the subject to whom the objects of awareness are "re-presented" is discharged. In indicating how it ought to be discharged the necessity of keeping Van Gulick's two levels will be reinforced. There is an important person-level capacity that plays a crucial role in the explanation: in my view, it is the capacity to self-ascribe.

HOGS theory, Brook and Raymont's "unified theory" of consciousness and my own adverbialism discharge Dennett's explanatory obligation in the same general way: each claims that representations for a self are not representations to a self. There is no place "where it all comes together": at the level of the systematic modelling of the capacities of

a person and the informational resources upon which that system draws, there must be a representation of a self for this plausibly to be a model of a conscious mental subject. Equally importantly, all three views claim that the notion of a self emerges from the first order description of how a cognitive subject is appropriately functionally organised. We don't have to describe the system and then add a self: an appropriately described system implicitly defines that it *is* for a self.

The problem for me, though, is that I do not share Brook and Raymont's belief that the representational underpinning of conscious – its necessary, but not sufficient basis – is made up of self-presenting states. Given their commitment to self-representationalism it is a short step for them to conclude that in any given act of representing there is an implicit awareness of self: one that can be made explicit. So I will have briefly to indicate how a different explanation will go once that assumption has been abandoned.

It can seem as if my sympathies, so far, are with the first order representationalist. If the only sense of the "givenness" of consciousness is a dispositional one of availability, then conscious states without meta-mentality are conscious. That view seems to me correct, as far as it goes, but it does not go far enough. Because I think Van Gulick was correct to want to explain a further fact about consciousness, namely, its unity. The dispositional givenness of conscious is not a theory of what makes a lower order state conscious, but dispositions can play a role in explaining that in which the unity of consciousness consists.⁹
[Thomas, 2008]

Following Michael Tye, I take this consciousness to consist in the totality of conscious experience from one episode of unconsciousness to the next. (Tye notes that Carnap held the same view, admittedly on epistemological grounds, in order to show that

the view has appeal independently of Tye's representationalism about consciousness. [Tye, 2003, pp. 106- 107]) Phenomenological unity is basic to our conscious experience, but it cannot, on pain of regress, itself be an experiential feature. There is nothing criterial, or individuating, within phenomenality itself that could allow us to divide experience into parts and wholes. Tye's maximal notion of "experience" follows directly from that negative claim.

My proposal is that in explaining this sense of unity, we have to advert to the perspective for whom experiential features are represented – just as Van Gulick argues in his HOGS theory. Phenomenological unity is the unity of the found world; the unity of consciousness is the unity of the perspective for which that world is revealed. At the level of the first personal perspective itself, we can explain how it is constituted by appealing to our capacity to self-ascribe any individual representation to that perspective. So this latter notion of the unity of consciousness is grounded on our capacity to self-ascribe any of our thoughts. This is our capacity to attach the "I think:" to those of our representations that are, as Kant put it, not "nothing" to us.

Brook and Raymond defend a very similar view: independently of their commitment to self-representational states, they are also committed to the importance of the unity of consciousness. Further, they make the point that given that their conception of this unity is not subsumptive – we are not to see a unifying state as subsuming two conscious parts of states, but rather as replacing them – any aspect of our conscious experience presents the totality of that experience. This claim is an important supplement to first order representationalism: FOR does not explain why any single conscious mental state has to be dispositionally explicable as part of a conscious whole.¹⁰ Brook and Raymond's point is

that the unity of consciousness should lead us to reject the idea of conscious mental parts; a unified consciousness is not a mereological whole. So the real problem with consciousness atomism is that when we are presented with a single mental state with which we are aware, we are also thereby presented with the conscious whole of which it is an aspect, not a part. If we take that explanandum seriously, then we have good reason to see that first order representational state as demanding integration into a global system. That is because it is only at the level of that system that we can explain the unity of consciousness. Amongst our global capacities – capacities at the level of Van Gulick’s global system – the capacity to self-ascribe plays a crucial role in expressing the unity of a conscious point of view. [Thomas, 2008]

Finally, a remark about the metaphor of a unitary “point of view” in a spirit consonant with Brook and Raymont’s approach to the same issue. The experienced unity of the world is not representation *to* a point of view: that reintroduces the undischarged “homuncular” conception of the self. The metaphor carries a misleading connotation: you do not occupy a point of view, or perspective. It would be less misleading to say you *are* it. Between one episode of unconsciousness and the next your experience exhibits a phenomenal unity with multiple aspects, not with multiple parts.

V

My aim in this paper has been both to have my cake and eat it. The relation between the most global representation and any more local representation is binary, a matter of higher order and lower order. It is also scalar, a matter of more or less. My point is that two claims can be true together independently of any claim about reduction across the two levels. Van

Gulick ought to postulate two levels of explanation that are inter-dependent and not reducible in either direction *and* it remains an insight that we can truly describe that distinction in wholly informational terms. Overall, I conclude that HOGS theory is a promising prospect for the explanation of both the nature of consciousness and the nature of its distinctive unity.

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List of Works Cited

AYDEDE, Murat and GUZELDERE, Guven [2005] ‘Concepts, Introspection and Phenomenal Consciousness: An information theoretical approach’, *Nous*, vol 35, no. 2, pp. 197-255.

BROOK, Andrew and RAYMONT, Paul [n.d.] *A Unified Theory of Consciousness*, MIT Press, forthcoming.

BROOK, Andrew & DEVIDI, Richard C (eds) [2001] *Self-Reference and Self-Awareness*, John Benjamins Publishing.

BROOK, Andrew [2006] ‘Kant: A Unified Representational Basis for All Consciousness’, in Kriegel and Williford, [2006].

Carruthers, Peter [2000]

DAVIES, M. & HUMPHREYS, G. W. (eds)[1993] *Consciousness*, Basil Blackwell.

DENNETT, Daniel C. [1992] *Consciousness Explained*, Back Bay Books.

DRETSKE, Fred [1993] ‘Conscious Experience’, *Mind*, 102 pp. 263 – 283.

DRETSKE, Fred [1995] *Naturalising the Mind*, Cambridge MA: MIT Press.

GENNARO, Rocco [1996] *Consciousness and Self-consciousness: A Defence of the Higher Order Thought Theory of Consciousness*, Advances in Consciousness Research, John Benjamins Publishing.

GENNARO, Rocco [2004] *Higher Order Theories of Consciousness: An Anthology*, Advances in Consciousness Research 56, John Benjamins Publishing.

HILL, Christopher [2009] *Consciousness*, Cambridge University Press.

KRIEGEL, Uriah [2003a] ‘Consciousness as Sensory Quality and as Implicit Self-Awareness’, *Phenomenology and the Cognitive Sciences*, 2, pp. 1 – 26.

KRIEGEL, Uriah [2003b] ‘Consciousness as Intransitive Self-Consciousness: Two Views and an Argument’, *Canadian Journal of Philosophy*, 33/1 pp. 103 – 132.

KRIEGEL, Uriah [2003c] ‘Consciousness, Higher Order Content, and the Individuation of Vehicles’, *Synthese*, 134 pp. 477 – 504.

KRIEGEL, Uriah [2004] ‘Consciousness and Self-Consciousness’, *The Monist*, 87 pp. 185– 209.

KRIEGEL, Uriah [2005] ‘The Same-Order Monitoring Theory of Consciousness.’ in U.KRIEGEL K. WILLIFORD (eds.), *Consciousness and Self-Reference*, MIT Press.

KRIEGEL, Uriah and WILLIFORD, Kenneth (eds.), [2006] *Self-Representational Approaches to Consciousness*, MIT Press.

KRIEGEL, Uriah [2009] *Subjective Consciousness: A Self-Representational Theory*, Oxford University Press.

LURZ, Robert W. [2003] ‘Neither HOT nor COLD: An Alternative Account of Consciousness’, *Psyche* 9(01) January, <http://www.psyche.cs.monash.edu.au/v9/psyche-9-01-lurz.html>

LYCAN, William G. [1987] *Consciousness*, MIT Press.

LYCAN, William G. [1996] *Consciousness and Experience*, MIT Press.

NAGEL, Thomas [1974] 'What is it Like to be a Bat?', *The Philosophical Review*, 83, pp. 435-50.

ROSENTHAL, David [1986] 'Two Concepts of Consciousness', *Philosophical Studies* 49, 3 (May), pp. 329- 359.

ROSENTHAL, David [1993a] 'Thinking That One Thinks' in DAVIES, M. & HUMPHREYS G. W. (eds) [1993].

ROSENTHAL, David [1993b] 'Higher Order Thoughts and the Appendage Theory of Consciousness', *Philosophical Psychology*, vi, 2: pp. 155 – 167.

ROSENTHAL, David [1993c] 'State Consciousness and Transitive Consciousness', *Consciousness and Cognition*, 2, 4 (December 1993), pp. 355-363.

ROSENTHAL, David [1997] 'A Theory of Consciousness' in *The Nature of Consciousness: Philosophical Debates*, BLOCK, N. FLANAGAN & O. GUZELDERE, G (eds) MIT Press.

ROSENTHAL, David [2003] 'Unity of Consciousness and the Self', *Proceedings of the Aristotelian Society*, 103, 3 pp. 325 - 352.

ROSENTHAL, David [2004a] 'Being Conscious of Ourselves' *The Monist*, 87, 2: pp. 161 –184.

ROSENTHAL, David [2004b] 'Varieties of Higher-Order Theory' in *Higher-Order Theories of Consciousness*, GENNARO R. J. (ed) John Benjamins.

ROSENTHAL, David, [2006] 'Consciousness and Intrinsic Higher Order Content' *Towards a Science of Consciousness: Tuscon VII*.

- THOMAS, Alan [1997] 'Kant, McDowell and Consciousness', *European Journal of Philosophy* (December) pp. 283 - 305.
- THOMAS, Alan [2003a] 'Consciousness, Reflexivity and Reduction', presented to *Towards A Science of Consciousness*, Prague.
- THOMAS, Alan [2003b] 'An Adverbial Theory of Consciousness', *Phenomenology and the Cognitive Sciences*, vol 2 no 3 pp. 161 – 185.
- THOMAS, Alan [2006] 'Reconciling Conscious Absorption with the Ubiquity of Self-Awareness', ASSC-10, Oxford.
- THOMAS, Alan [2008] 'Higher Order Thoughts, Self-Ascription and Conscious Unity' TSC, Arizona, April 11.
- THOMASSON, Amie [2000] 'After Brentano: A One-Level Theory of Consciousness' *European Journal of Philosophy*, 8: 2 pp. 190 – 209.
- THOMASSON, Amie [2003] 'Introspection and Self-Knowledge' *Phenomenology and the Cognitive Sciences*, 2:3 pp. 239 – 254.
- THOMASSON, Amie [2005] 'First Person Knowledge in Phenomenology', in David SMITH and Amie THOMASSON (eds) *Phenomenology and Philosophy of Mind*, OUP, pp. 115-138.
- THOMASSON, Amie [2006] 'Self-Awareness and Self-knowledge', *Psyche*, 12.
- TYE, Michael [1997] *Ten Problems of Consciousness: A Representational Theory of the Phenomenal Mind*, M. I. T. Press.
- TYE, Michael [2002] *Consciousness, Color and Content*, M. I. T. Press
- TYE, Michael [2005] *Consciousness and Persons: Unity and Identity*, M. I. T. Press
- VAN GULICK, Robert [2000] 'Inward and Upward: Reflection, Introspection and Self-Awareness', *Philosophical Topics*, 28/2 pp. 275 – 305.

VAN GULICK, Robert [2004] 'Higher Order Global States' in GENNARO (ed) [2004].

VAN GULICK, Robert [2006] 'Mirror, Mirror, is that All?' in Kriegel, Uriah and Williford, Kenneth (eds.) *Self-Representational Approaches to Consciousness*, MIT Press, pp. 11-40.

VAN GULICK, Robert [2006] 'Subjective Consciousness and Self-representation', *Philosophical Studies*, 159, pp. 457-465.

VAN GULICK, Robert [2013] 'Phenomenal Unity, Representation and the Self', *Philosophy and Phenomenological Research*, vol. 86, no. 1, pp. 209-214.

VILLANUEVA, Enrique (ed) [1991] *Consciousness: Philosophical Issues*, Ridgeview Publishing.

WILLIFORD, Kenneth [2006] 'The Self-Representational Structure of Consciousness' in Kriegel and Williford, [2006].

ZAHAVI, Dan & PARNAS, Joseph [1998] 'Phenomenal Consciousness and Self-Awareness: A Phenomenological Critique of Representational Theory', *Journal of Consciousness Studies*, 5 5/6 pp. 687 – 705.

ZAHAVI, Dan [1999] *Self-Awareness and Alterity: A Phenomenological Investigation*, Northwestern University Press.

ZAHAVI, Dan [2002] 'First Person Thoughts and Embodied Self-Awareness: Some Reflections on the Relation Between Recent Analytical Philosophy and Phenomenology', *Phenomenology and the Cognitive Sciences*, 1, pp. 7 – 26.

ZAHAVI, Dan [2004] 'Back to Brentano?', *Journal of Consciousness Studies*, 11/10 – 11 pp. 66 – 87.

ZAHAVI, Dan [2005] *Subjectivity and Selfhood*, MIT Press.

¹ I am very grateful to Professors Brook and Raymont for sharing their unpublished manuscript with me.

² This claim is ambivalent: “more global” or “the most global”? That is the point on which I will focus in this paper.

³ This is the problem that standing in the correct relation only makes a lower order state conscious if it is known “immediately” and roughly simultaneously, that requires a specification of a canonical way of knowing to avoid HOT theory simply being a co-variationist account (such that the co-variance may have a hidden dependence on an underlying variable). [Van Gulick, 2004, p. 71]

⁴ The problem of qualia is that to meet the requirement that being in a mental state involves features, or aspects, that explain “what it is like” to be in such a state, the HOT theorist has to postulate that lower order states possess a disposition to give rise to such properties even when the state is not in the right relation to the meta-intentional state that makes it conscious. This is not, as Van Gulick notes, an inconsistent position but it seems an uncomfortable one. [Van Gulick, 2004, p. 73]

⁵ It is hardly surprising, then, that Van Gulick reports that “I have sometimes been urged to forgo the higher-order model and to opt instead for either a straightforward global state model that appeals only to first order representation (FOR)”. [2004, p. 79]

⁶ Brook and Raymont notice this, labelling it Van Gulick’s own version of the generality problem: “Lots of psychological states are integrated in lots of complex and interesting ways in lots of rich cognitive systems without anything being conscious of them...the integration can be all the way up to the stage of semantic processing without consciousness” [Brook and Raymont, unpublished ms, chapter 7]

⁷ Lyyra and I hold very similar views: he writes “The sense of givenness defined by availability is reminiscent of the dispositionalist theories of consciousness, namely, those in which conscious states are defined by their availability to other, not themselves conscious, systems in the mind (e.g. Baars, 1998). This is a *first-order* dispositionalist theory....A first-order dispositionalist theory of consciousness can be formulated that admits of the development of higher order reflective capacities, although at the same time driving a wedge between them and consciousness. Metacognitive capacities would be just one of the nonconscious systems that determine the contents of consciousness”. [Lyyra, 2008, pp. 80-81] Lyyra (*ibid*) contrasts this “mentalized consciousness” and its externalist role in regulating mental functioning with the more explicit “reflexive consciousness” of active self-awareness characteristic of the phenomenological tradition. My focus here is not incompatible with this view (Lyyra notes the similarity between his view and Thomasson [2000, 2005, 2006] and Thomas [2003]), but focuses on one system wide capacity that explains not consciousness, but its unity.

⁸ Van Gulick implies that he sees an affinity between HOGS theory and the self-representationalist tradition, but I think that it is mistake. No part of his view need be committed to treating any individual mental state as carrying any reflexive content. The

part to whole relation in HOGS theory exemplifies not the self-representational character of any state, but, I will argue (following Brook and Raymond) the fact that any aspect of a consciously unified experience reflects the unity of the whole.

⁹ I argue in Thomas [2008] that Rosenthal's pessimism (an error theory) for conscious unity in Rosenthal [2006] is misplaced. He is right that dispositions cannot explain consciousness, but they can explain its unity.

¹⁰ Not an objection to Tye's version of first order representationalism; he shares the same conception of conscious unity as the one defended here and by Brook and Raymond.