Tye: A critique of his stance on non-mental representation

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Abstract: In four parts, I first critique Tye's philosophically unorthodox stance on representation for not being radical enough. I then point out the dangers of extrapolating conceptual representation to non-mental characteristics and artefacts. In part 3, I support my critique with an example of non-mental representation and finish with a critical overview of Michael Tye's 'Poised Abstract Non-conceptual Intentional Content' model.

William Lycan's (2008) introductory statement on intentionality for the Stanford Encyclopedia of Philosophy begins as follows:

> Intentionality is the power of minds to be about, to represent, or to stand for, properties and states of affairs.

It is the assumption that the defining attribution of intentionality is its relation to mental phenomena. But Tye qualifies his stance as 'unorthodox', distinguishing it from that of Colin McGinn (1982 - The Character of Mind), John Searle (1983 - Intentionality), and Ned Block (1995 - On a Confusion about a Function of Consciousness)

> *All* states that are phenomenally conscious—*all* feelings and experiences—have intentional content. (*p.93*)
> The overall conclusion I draw is that feeling and experiences generally have intentional content. Philosophical orthodoxy on this topic is just plain wrong. (*p. 131*)

I am in good company in holding the view, along with Michael Tye, that philosophical orthodoxy is wrong on intentionality, but I intend to show through brief and compelling analysis that Michael Tye's stance is not nearly radical enough. The view that intentionality is exclusive to mental phenomena (c.f. Brentano, 1874/1973 - Psychology from an Empirical Standpoint) creates an interpretative chasm between the mental and everything else. And so it has been orthodoxy to assume, without critical reflection, that representation must relate exclusively to us—in virtue of our 'mind'—by whatever interpretative means proponents elect to define it. In contrast, my position promotes the thesis that there are transitional emergent steps interspersed with evolutionary stages that link the material to the mental: an expansionist framework whereby different categories of representational transitions realise different classes, or evocations, of intentionality.

Part 1 - Analysing Tye's position on representation

I start with a critical analysis of a short passage from Chapter 4. In part 2, I will show how the points I raise here reveal other issues with Michael Tye's stance on representation and intentionality. He begins section 4.2,

> Consider the case of tree rings. Intuitively, the number of rings on a cross section of a tree trunk *represents* something... (*p.100*)

This statement is absolutely correct and is a powerful endorsement of my stance (Hierarchical Construct Theory of Consciousness): there is something about the rings on a tree that represents something. However, Michael Tye misses the profundity of this statement by continuing,

> the number of rings on a cross section of a tree trunk *represents* something about the tree, namely, how old it is.... (*p.100*)

This is a key error. Yes, there happens to be a correlation between the number of rings and the concept of age but that is not what the rings 'represent' *in and of themselves*. The rings must represent something, agreed, but the idea expressed—specifically that the number of rings represents age—is entirely conceptual in nature: the *concept* of age is a numeric representational idea that reflects human understandings concerning the earth's rotation about the sun. However, a tree is not privy to this kind of conceptual understanding. Inevitably, an alternative question begs as to what tree rings, indeed what any innate non-conceptual physiology *truly* represents beyond human conceptual interpretation. This question becomes even more intriguing when one asks it of innately acquired neurological mechanisms (of which, more later). Tye has jumped, from what the rings represent in and of themselves, to a conceptual interpretation. In itself a tree's physiology is a complex construct whose influences determine its complex hydrocarbon architecture in response to the particular environment in which it has evolved. Its features—the particulars of its physiology and its consequential architecture—thereby represent something about that environment. But Tye ignores the representational content of innately acquired physiologies, instead concluding,

> ...it is an objective, observer-independent fact... Before any human ever noticed any rings inside trees, the number of rings represented the age of the tree... (*p.100*)

On the contrary, a conceptual-type interpretation of what tree rings 'mean' in terms of 'age' is entirely observer-*dependent*. By way of contrast, the unavoidable question arises, what gives an innately acquired physiology its observer-*independent* intentionality to represent anything. To summarise, one can apply conceptual correlative interpretations to any observed or imagined scenario. To speak of these concepts however, as representing something observed or imagined, is to ignore the possibility that those observations or imaginings themselves may have representational features through the mechanisms of their own non-conceptual class of construction.

What conclusion does Michael Tye make concerning physiological representation?

> How should we think of natural representations of this sort? Well, different numbers of rings are correlated with different ages.... What really matters, it

appears, is correlation, or more accurately, causal covariation, *under optimal conditions*. (*p.100-101*)
The key idea, then, is that representation is a matter of causal covariation or correlation... under optimal conditions. (*p.101*)

In speaking exclusively of conceptual interpretative representation, Michael Tye is ignoring the intrinsic representation of the object under observation. He is ignoring the "nature" in 'natural representations'. Critically the point is lost in passing; that some non-mental constructs are representational *in and of themselves*.

When it comes to intentionality, there is every reason to question the rationale of philosophical orthodoxy. Thus, we can redraft Michael Lycan's opening Stanford Encyclopedia entry, 'Intentionality is the power of minds to be about, to represent, or to stand for, properties and states of affairs', by removing the word "mind" and replacing it with a concise alternative that does not require interpretative boundaries to be drawn: 'Intentionality is the power for the intrinsic properties of all construct-types to be about, to represent, or to stand for, states of affairs.' Apart from its intuitive coherence, this redrafted version has the benefit over the old of denying the need for an explanatory leap between non-mental and emergent (or magical) mental phenomena. Instead, what it requires, is a need for an overarching explanation of the relationship—the *evolving* relationship—between different types or classes of representational constructs.

To conclude part 1, there are different classes of representation. Alternatively, one might say there are different types of physical mechanism or physical formulations that demonstrate different types of self-purpose, or intrinsic purpose, through the nature of their construct. Perhaps, intentionality has deeper roots than first assumed.

Part 2 - The dangers of extrapolating from conceptual-type representation

This proposal about representation applies straightforwardly to simple artificial or conventional examples. Consider the height of the mercury column in a thermometer. It represents the temperature of the surrounding air. (*p.101*)

Immediately one notices problems with the idea of conceptual-type representation as it is applied "straightforwardly" to a thermometer. As I suggested earlier, one can create a conceptual correlation between anything, be it real or imaginary. But the problems run deeper still:

Unlike the tree, there is absolutely no representation in the thermometer *in and of itself* (this is an issue I cover in depth in my analysis of Daniel Dennett's Intentional Stance, http://mind-phronesis.co.uk/intentional-stance). It is true, a human can subsume notions of representation through the concept that identifies rising temperature with incremental markings on the glass of a mercury thermometer. But everything that a human might conceive of as a representation need not, necessarily, be a representation in and of itself (in absence of the human)—hence, the observer dependent-independent distinction. By utilising conceptually constructed principles, a human can draw representative correlations between any set of physical relations, but those representations ignore the nature of the studied object's true representational content i.e., its intentionality *or, importantly, its lack of it*. Another example of this confusion is

to be found in Fodor (1975 - The Language of Thought cf. introduction) who draws parallels, for example, between the complexities of economics and psychology; my point of contention being that the economy does not represent in and of itself (although conceptual representations can be utilised to identify causal principles), whilst the mind (to be simplistic) does i.e., the parallel is a false one and no inference from their comparison can be valid.

False analogising between computers and neural mechanisms

> At these early stages, the visual system is much like a calculator that has been hardwired to perform addition. There are no stored representations in memory, whose retrieval and manipulation govern the behaviour of the system. (*p.103*)

Computation, in and of itself, possesses no representational content i.e., any representation inferred from computation is observer-dependent—the dependence is through human interaction. This is in contrast to innately acquired physiologies (as argued with the tree rings analogy). The idea that the visual system is hardwired and that there are no stored representations denies the fact that the neural complex is an evolved representational construct, note, not by virtue of its function, but by virtue of its *evolved responsive physiology*. It is true that the physiology of a visual system are not realtime experiential representations; consequently, they appear (like a freeze frame) to be hardwired, in much the same way as a computer. But the representations are, nevertheless, determined over evolving generations in virtue of a dynamic exchange with the environment: the physiology of a neural complex (just like the physiology that gives rise to the formation of tree rings) is a representational consequence of a particular type of replicating construct whose dynamic exchange with the environment over generations indicates intentionality—a intentionality of purpose, in and of itself, that reflects and is profoundly *sensitive* to the *qualitative impact of environmental conditions*. It is not difficult to see why philosophical orthodoxy has representation expressed very narrowly—through the *activity* and *function* of neural networks— because innately acquired mechanism and function appears to be static and unchanging. But it is not: Critically the point is missed by false inference; that some non-mental constructs are *not* representational in and of themselves.

To conclude part 2, whilst one might conceive that there is representation in artefacts and in the function of computers, the "representation" is not intrinsic to the object in itself. In such example, the representation is granted by the human conceptualised interpretative world-view through a complex of correlative concepts. This kind of thinking leads to misappropriation of representation and of intentionality, for example, in the comparison of computation and neural mechanism. This is where computational models go awry through the claim that they can develop representational content given enough 'complexity'.

Part 3 - What might phenomenal properties represent?

Michael Tye, it would seem, is of the view that no explanation is required of the derivative origins of qualitative phenomena: in the passages below, he is stating that

external objects have a quality and that the brain is a conduit to that quality viz., a direct qualitative correlative conduit, thereby providing internal phenomenal access to the objects with their intrinsic observer-independent phenomenal properties.

> The obvious view, suggested by our color experiences (and compatible with my position), is that the colors we see objects and surfaces to have are simply intrinsic, observer-independent properties of those objects and surfaces. (*p.145*)
>
> To undergo a state with a certain felt or phenomenal quality is to be the subject of a state that represents a certain *external* quality. (*p.162, italics added*)
>
> Summary: If the physicalist view of the world is correct, then the felt qualities of our experiences can make a difference to how we behave in only one way: they must be generated in the experiences from the objective, physical properties of the underlying firing patterns that constitute those experiences. In this way, the felt qualities inherit the causal powers of the lower-level physical properties that generate them. The generation here requires that it be necessary that once the appropriate objective, physical property is present, such and such a felt quality is present, too. (*p.53*)

As an alternative view, consider the following:

Understanding the qualitative relevance of colour

There are two ways of understanding the colour of an object.

From a physical standpoint, an object might reflect light in the frequency 526–606 THz whilst a second object 400-484 THz. That these objects reflect light in these frequencies is objectively the case, whilst the identified frequencies are a correlative concept that humans have determined by associating spectral frequencies (quantified by physics laws) with particular qualitative colour phenomena.

The second way of understanding colour is to consider the following. Let us say, that on earth, surfaces that reflect frequency 526-606 THz are ubiquitous (for complex reasons that we shall not explore here for the sake of brevity) and that these surfaces are of no material evolutionary benefit to a particular organism species. Conversely, some rare objects that reflect frequency 400-484 THz are highly prized by this particular organism species for their nutritional content. It would be qualitatively pertinent, and responsive to survival pressures, for that species to evolve mechanisms (innate mechanisms) that are hyper-alert to 400-484 THz reflecting colourations, as these mechanisms would enable the organisms of that species to locate those nutritional, highly prized objects more efficiently. Conversely, it would be pertinent for innate mechanisms to be indifferent to the ubiquitous 526-606 THz reflecting objects. Additionally, if those desirable 400-484 THz objects had the added characteristic of possessing the contours of a sphere, rather than jagged contours, this would supplement the role of shape in the qualitative identifications of those objects and further benefit those individuals that possessed innate mechanisms capable of making the distinction with automated efficiency. In themselves, these coloured objects have *no* phenomenal identity, but the organism will tend to evolve innate mechanisms that are qualitatively distinctive and relevant. Their mechanisms might remain innately acquired and

therefore, *appear* both non-representational and "hardwired"—much like computational mechanisms. But these appearances would be deceptive as the innate physiologies would indeed be representative of the environment's qualitative relevance to that organism species. Thus, it makes sense to interpret each of these frequencies (whose colours we experience as green and red), and each shape (spherical and jagged), as qualitatively differentiated and observer-dependent in this particular species. The organism's innately acquired mechanisms are an observer-dependent representation whose qualitative relevancy is engaged anatomically before any associative learning, introspection, feeling, or emotion capabilities have evolved. Critically, one can recognise an intrinsic intentionality in replicative constructs that evolve qualitatively differentiated representations of environmental characteristics, in response to survival pressures.

To conclude part 3, all phenomenology is observer-dependent; and so it is with all observer-dependent physiological mechanisms be they plant or animal. Even the simplest of replicating organisms tend to evolve physicochemical mechanisms of qualitative relevancy because of the responsive impact of those mechanisms on survival pressures.

Part 4 - Mind the Gap: The PANIC Theory

Given the above, it is also difficult to understand how Michael Tye starts from the following attitude,

> What is wanted here is the description of a possible *mechanism* that underlies the generation of perspectival entities by nonperspectival ones and that closes the enormous gap we intuitively feel between the two. This is the problem of mechanism. (*p.43*)
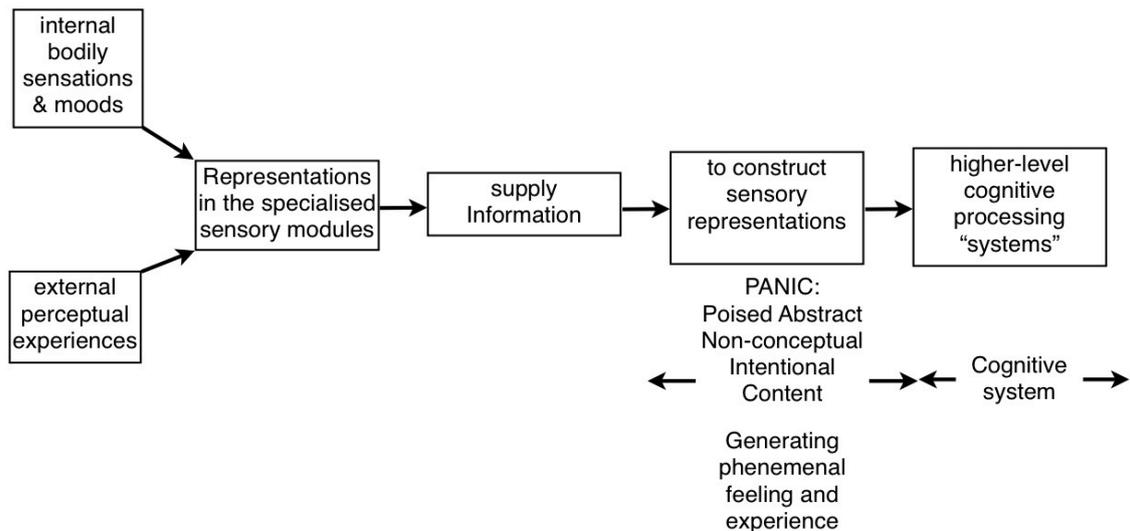> But what could this mechanism be? We currently have no idea. (*p.46-47*)

to the view in his summary in chapter 6, that

> The problems of mechanism and perspectival subjectivity are now solved, as is the paradox of phenomenal consciousness. (*p.171*)

It would appear the answer lies in his PANIC theory cf. figure below—Poised Abstract Non-conceptual Intentional Content. This diagram below is of my own design and is constructed from the text found in chapter 5, p. 137, *5.2 Phenomenal Content: The PANIC Theory.*

> I have justified the PANIC theory by reference to its explanatory power.... It also allows us to solve all the various problems of consciousness we have encountered so far, and it brings a simple and persuasive solution to the paradox. No other theory or approach I am aware of can claim as many successes. (*p.184*)

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┌──────────────┐
│   internal   │
│    bodily    │
│  sensations  │
│   & moods    │
└──────────────┘
        ╲
         ╲
┌──────────────────┐   ┌────────────────┐   ┌────────────────┐   ┌────────────────┐
│  Representations │   │                │   │ to construct   │   │  higher-level  │
│ in the specialised│→ │    supply      │ → │   sensory      │ → │   cognitive    │
│  sensory modules │   │  Information   │   │ representations│   │  processing    │
└──────────────────┘   └────────────────┘   └────────────────┘   │   "systems"    │
         ╱                                                         └────────────────┘
        ╱
┌──────────────┐                               PANIC:
│   external   │                          Poised Abstract
│  perceptual  │                          Non-conceptual
│ experiences  │                  ←        Intentional    → ←   Cognitive    →
└──────────────┘                             Content              system

                                            Generating
                                            phenemenal
                                          feeling and
                                            experience
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Referring to the diagram one can see that by Michael Tye's account, perceptual representations 'supply information' in order to construct 'sensory representations'. But there is an explanatory hole in the idea of "information supply". Dots and dashes are not information in and of themselves. They can only be said to carry information, if there is some encoded interpretation to be had. Perceptual representation cannot be said to supply information without an explanation of a proposed interpretative (intentional) mechanism. *A fortiori*, of what is a mechanism to interpret in neural activity if there is no connective account to the root underlying the nature of the representation itself. One needs an explanation of the origins of phenomenally qualitative content. It is implausible to suggest that mentality materialises the attribute of intentionality, of itself. A connection must be made in naturalist, evolutionary, or mechanistic terms.

Michael Tye states,

> Introspection provides us access to our PANIC states.... What happens introspectively, according to the PANIC theory, when I attend to a particular feeling, is that I think to myself that my state has *this* phenomenal character...

Who is the "us" that we might do the accessing to our PANIC states? Where is the representational construct that makes us a part of the phenomenology rather than some homunculus observing the 'information' as it arrives on its interpreting monitor? What is the mechanism behind the origins of feeling that there is such a thing as an "I" that intends to attend it? Introspection, the process, and the "I" that is the "self" must be explained as a feature of the construct for the theory to be coherent.

To conclude part 4, inevitably, the representational mechanisms must evolve and develop all the way up the evolutionary tree. And the intentionality must have its roots deep down in the physical strata from which the replicating organism has reason to emerge. A coherent theory must explain these relations in terms of the evolutionary development of representational content and the evolving classes of intentionality. This website is dedicated to showing how the Hierarchical Construct Theory of Consciousness (Formerly call 'Hierarchical Systems Theory of Consciousness') answers these questions.

REFERENCES

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