Philosophy of Mind

Ontomorph: Mind Meets The World

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ABSTRACT: Chunking of the world as done by the mind depends on how the world is. The world is one object, but not a simple one. Morphological content is just right to allow organisms which move in the world to perform the appropriate dynamical chunking, which from the perspective of the higher cognition may appear to consist of several separate objects. Embracing nonreductionism is desirable because organisms are part of the world. At bottom, there is nothing else other than physical stuff. But it is possible, and indeed it is true, that the physical stuff is very richly structured. One kind of physical stuff are things such as minds. The intricate structure of minds, particularly the complicated topography of their multidimensional space is ultimately responsible for qualitative experiences and consequently for the hard problems of consciousness. As the space of morphological content is itself a part of the physical world, it can begin to throw light on this problem and primarily at the qualitative states — as products of encounter of one form of physical stuff, organisms, with the rest of the physical stuff around them. Some surfaces of the world are moulded and shaped in their encounter other surfaces in the world. But the world has many dimensions; some surfaces are richer than others. The purpose of the shaping is the tacit expectation of further encounters with surfaces in the world.

I. Bringing Ontology Of The World And Cognition Together

The issues of ontology and cognition are tackled in a separate manner. "As I try to think about the issues in cognition, I try to exclude the issues about how the world is" is an often adopted attitude.

This does not mean that investigation of the mind would be extraneous to ontological questions. Quite to the contrary. A respectable contemporary philosopher would normally adopt physicalism as a hypothesis about the mind, thus embracing a materialist ontology. A materialist treats organisms possessing mind as parts of the physical world. The way how the problem is posited then generates a question about the persisting explanatory gap, or about the reductionist hard problem: All in being treated as a part of the world, organisms possessing mind still differ from the World in that they have consciousness consisting of qualitative experiences which are not reducible to the physical World. So one may wish to be a nonreductionist concerning the ontology of mind.

Endorsing nonreductionism is desirable. But not because of particular and exemplar structure of mind as persistently mysterious qualitative part of organisms. Rather,

nonreductionism is desirable because of the fact that organisms are parts of the world themselves. So there is nothing to be reduced in organisms: there is no candidate part of organisms such as their minds which would still somehow not be a part of the structure of the world. To put it bluntly, you can not reduce a bottle to a bottle. You have to paraphrase the expression "bottle" in some other vocabulary, and one possibility is to adopt the vocabulary of contemporary physics. You can not reduce biological stuff to biological stuff. You have to paraphrase the biological vocabulary into another one, such as the vocabulary of physics. The real bottom line is that you can not reduce physical stuff to the physical stuff. The reason is very simple if you are a materialist and physicalist. At the bottom, there is nothing else around as the physical stuff. But it is possible, and indeed it is true that the physical stuff is very richly structured. Just imagine that one kind of physical stuff are such complicated things as minds.

The intricated structure of minds, particularly the complicated topography of their multi-dimensional space, such as it occurs in Morphological Content, is ultimately responsible for qualitative experiences that are at the gist of the so called hard problem of consciousness. As the space of Morphological Content is itself a part of the physical World, it can explain the hard problem or the qualitative states — as products of encounter of one form of physical stuff, organisms, with the rest of the physical stuff around them.

Some surfaces in the World, such as surface of this rock, get moulded and shaped while they encounter another surfaces in the World, particularly surfaces of other rocks that get into their way. But as the World has many dimensions, some surfaces are quite richer than others. One such surface is physically based Morphological surface. Its many dimensions are shaped through species' generic encounters. The purpose of the shaping is the tacit expectation of further encounters with surfaces in the world. There is nothing mysterious in this. Look at the physical structure of this leaflet of straw, or at these leaves. Their form proceeds from anticipation of further encounters with the kinds of surfaces and pressures that it has already encountered. Compare that also surface of the

rock gets moulded and shaped in such a way that its future encounters with similar surfaces will get smoother. In the same sense, the multi dimensional surface of the mathematical-state transitions in organisms as parts of the world was shaped in such a way that encounters with similar kinds of surfaces will be facilitated in the future. The same holds for linguistic ability of organisms: this ability is actually grounded in a multi-dimensional abstract surface that anticipates further encounters of the surfaces of a kind.

So this is the first idea how to explain mind as a part of the World. The basic supposition is that there is just one World, and similarly as some chunks of the World are formed so that they become McDonald eateries, other chunks are trees, and some of them are minds. All these chunks of the world come in different shapes and densities, they are variously thick, but all they are physical stuff, which is ultimately explainable by the help of physical forces and configurations.

Representations are abstract spaces that are shaped in order to expect the encounter of surfaces of a kind. Mind is explained in the mainstream literature ontologically, as a kind of physical stuff. Nevertheless this still leaves the possibility to see it as not quite a kind of stuff, for it is intertwined with qualitative experiences and with the hard problem of consciousness. It is nevertheless possible to treat mind including qualitative experiences as a part of the physical World, which really is One World, the hard problems included.

It is natural to endorse ontology — usually materialist and physicalist — in the philosophy of mind. But one abhors somehow to face the consequence that mind is really a part of the World. One takes escape by producing hard problems, the ultimate refuge for seeing mind as something special.

All in endorsing the study of mind in ontological terms, contemporary materialists abhor the very idea that ontology of the World would be important for the study of the mind (as a part of the World). It was not always like that. Phenomenologists, starting with Brentano, and continuing with Husserl, Heidegger and many others, studied the mind as an ontology of the World. This approach needs to be elaborated. The basis for this may be provided by Parmenidean Materialism such as proposed by Terry Horgan. Endorsing Parmenidean Materialism first implies to endorse Materialism, which provides a welcome methodological treatment of Phenomenological projects. They are engaged in ontology, but their efforts are often put into question by their endorsement of dualism. The proposal is to leave no such escape in the World as One Material entity.

If cognition is in the World, and if the World in all of its dimensions is material, then the question is how one material dimensions of the World relate to other material dimensions of the World. One may see the vicinity of this problem to the problem of intentionality. This problem may be solved by looking closer at the structure of the mind. There is a multi dimensional space at the level of mathematical state transitions description of organisms. Multi dimensional abstract space is a part of the World, and it is shaped with previous and anticipated encounters with other parts of this very complex World.

II. The Chunking of the World as Done by the Mind Depends on how the World Is

This sounds like correspondence claim. It may be. But consider that according to the revious discussion we have to understand the World as One entity. Thus the World also encompasses the mind. Now it is reasonable to suppose that the mind as a part of the World is richly structured. But the World, although One, is richly structured as well. The mind as a part of the World continuously encounters variations in the structure of the World. Mind gets shaped by these encounters, and being shaped means moulding its structure so that similar encounters may be anticipated, so that future encounters (of surfaces) would be handled as smoothly as possible. World as a Blobject continuously endures many changes, and these changes follow constraints posed by the fact that the

World is material and physically-complex-entity. If this is right, then the mind—the morphology of the mind's space — is indeed shaped by the (rest of the) World, by how the World is. This is not the classical correspondence any more.

Although the World is One, it may and indeed it does have many regions. The World is a rich structure. One may see many dimensions of the abstract space of the mind being shaped modularily, in order to fit these regions as appropriately as possible.

III. The World is One Object, but not a Simple One

One first reaction to the Parmenidean claim that there is One World may be that the

World is simple. We are used to see individuals as simple. But it is not certain that the World is individual. It may be that the World is not really divisible, for if this would be the case it would not be One. And it certainly does not follow that a thing, if it is one, is simple. Suppose that computer is one thing; in no way it seems to be simple. It has many parts. Parts have several intertwined relations. Program constantly transforms the activity of the computer.

IV. Morphological Content is Just Right to Allow Organisms Moving in the World to do the Appropriate Dynamical Chunking

It is very important that all in being parts of the World, organisms have a peculiar property of moving in the World, constantly transforming and moulding the abstract multi-

dimensional space and representations responsible for encounter with a certain kind of surfaces in the World.

It is a natural supposition then to claim that the abstract morphology of the mathematical-state transitions is shaped in such a way that it allows encountering the transformations in the World through movement. Husserl has analyzed movement as an integral part of perception, and proposed to see the abstract phenomenological space responsible for construction of things. Study of deictic pointers recognizes bodily movement succeeding at the rate of one third of a second, such as saccadic eye movement, as determining the shaping of representations, which have themselves to be seen as abstract multi dimensional overall cognitive space of organisms.

Particularly deicitc pointers show that the abstract space is made for adapting to the future encounters with surfaces in the World. The natural tendency for cognitive systems is to chunk the word at the mathematical-transition level.

V. From the Perspective of the Higher Cognition World Tends to Appear as Consisting of Several Separate Objects

Things look different from the perspective of higher cognition. In order to make sense of the encounters with the transforming world, organisms tend to interpret transformations of the world which is really a jello, as genuine chunks. But this is mistaken, if the World is One: there really are no chunks. However, it is a cognitive tendency, rooted in the deictically formed shape of the abstract mathematical level of cognition, to perceive separate objects. Troubles with vagueness show that such supposition of separately existing objects is really mistaken.

Horgan has adopted the attitude of quantifying with one's fingers crossed. This simply means that we suppose there to be entities, many individual objects in the World. But actually there are none. There is the tendency to see objects as separate, a tendency rooted in the deictic components of abstract morphology of the mathematical space level.

Q: If two billiard balls hit each other, it is difficult to deny that there are two separate objects involved. If a car hits you, the same follows.

A: It does not follow. Suppose that just this amount of jello exist. You can take some chunks. Are there many jellos now? No, it is at least possible to claim that these are transformations of One Jello. In the same sense, car and you are transformations of the complex World. One complex World is not simple. So several transformations may and do appear in it. From the perspective of you higher cognition, these transformations may appear as separate chunks, a tendency formed by your encounters with previously encountered transformations.

VI. The General Project

Let us not forget the general project. It has to be shown that the abstract multi-dimensional space at the mathematical-transitions level is just right for an organism's encounters with the world. The World and its ontology thus matters for an account of cognition. This is actually nothing else than the principle of hand and glove fit of "the Fundamental Principle of Cognitive Design" (HT, p. 154). Just that the fit between mathematical and cognitive levels has to be supported by the ontological structure of the World. But World is not a collection of objects, as interpretations of the cognitive level, induced with topography of the mathematical level invite us to conclude. World is a continuous transformation according to points governed by laws of physical structure. Thus it is important for study of mind to embrace the dynamical physical systems perspective, in order to account for the

World. It has to be shown that cognitive project can not succeed without the ontological, Parmenidean Materialist one.

VII. Objection Considered: No Ontology is Really Needed if One Stays with the Mathematical and Cognitive State Transition Levels

It may be objected in the following way to the overall project of bringing cognition and ontology of the World together. There is no need to bring the World into an account of mind, because first, the correlations needed, such as the one introduced by the Fundamental Principle of Cognitive Design, are just correlations between the levels of the cognitive architecture. So mathematical level needs to match the cognitive level, but not the World. And secondly, even if we suppose that instead of cognitive level we would need the World, the World would not be needed at all, for we are dealing with a model of mind. But models of mind are only plausibly interpreted internalistically. So again the World and its ontology is not needed.

The response to these objections is as follows. If the basic correlations would be only between levels of description in models of mind, then it is hard to see why they would be needed. One can make a story about levels to match, i.e., mathematical level to support the cognitive level. But if only cognitive levels would be concerned, there would be no reason for performing chunking at all. Correlations between two cognitive levels would be a mere formal play. But this most probably is not the case, because the reason for performing such correlations would then be absent. So there must be some correlation with the rest of the World. As against this, it may be remarked that there is no such shaping according to the World necessary, as the World is One, and so organism is not different to it. But consider the following. Let us presume that there is a car, and that it has several parts. In this way of talking we may then continue to affirm that it is very important where a particular part will be in the whole of the car, for otherwise the car would not function, and precisely in order to fix comparable arrangements we pay our mechanic. So the arrangement of parts in the overall structure of a car matters. In the same sense, the arrangement of minds in the overall structure of the World matters as well. It is important that they fit. Nonobstantly that in the deep ontology there are no cars or minds at all, but just One World.

What about the claim concerning plausibility of internalism, based on the claim that we are dealing with models of mind? One can be internalist in a model of mind. But still, the only reason to be structured is to match the structure of the rest of the World.

VIII. Objection: You do not really Need Morphological Content in Your Ontological Story

Q: Why would you need Morphological Content at all? All you need are cognitive-state transitions. They seem to directly interact with the world.

A: I need Morphological Content. It gives the background to the touch of an organism at its cognitive level surface with surfaces encountered in the world. Otherwise it would be as if the surface would not be supported by any structure. It would be as if two rocks hitting at each other's surfaces would be able to perform this without any bodily physical structure, just the surfaces being there. Each contact needs some background physical structure. There are no rocks consisting just of surfaces. There are no cognitive encounters without the background of Morphological Content.

Q: But what is the actual job of the Morphological Content? It seems to be somewhat like inductively practically putting together of items without recognizing them to be tokens of a type. I practically range A to be close to B without forming any concept or general representation of AB.

A: This practical response shows that whatever appears at cognitive surface is supported by the morphological background.

IX. Objection: You do not really Need Cognitive Transition Level in Your Ontological Story

Q: Let us suppose that you need mathematical transition level. But then you will have direct resonance between this level and between the landscape of the World. In this case there will be no need for you to buy the cognitive-transitions level.

A: Wrong. I will still need cognitive transition level. For it has to fulfil the cognitive function of translating the potential multi dimensional space of mathematical state transitions in such way that they will actually interact with regions of the World. The job of mathematical transition levels is to provide a landscape indicating several potential responses to the World. Whereas cognitive-state transitions level actualizes TCS's (total cognitive states) to deal with the momentary surfaces of the World that I encounter.

X. Comparison of Morphological Content with the Dynamical Landscape

Morphological Content and its landscape pushes from level below to the upper cognitive level. Each instance at the cognitive level is supported by the whole structure of the landscape.

If I think "This is a dog", but in the landscape of the morphological space, dog is close to the cat and to many other items, all these items support the appearance of TCS This is a dog. But they do not support the cognitive space explicitly, rather like a part of the iceberg submersed into water supports its peak. This is close to Freudian metaphors of consciousness being supported by a large underwater structured body of unconscious.

XI. Bodily Movement as Shaping of Representations

A specific level of abstraction in forming of representations may be attributed to the bodily movements, such as saccadic eye movements, that succeed at one third of a second time scale. This bodily movement leads to deicitc peaks in the morphological landscape.

Bibliography

Baumgartner, Elizabeth et alii ed. (1996) *Handbook: Phenomenology and Cognitive Science*. Würzburg: Röll.

Horgan, Terence. (1991) "Metaphysical Realism and Psychologistic Semantics", *Erkenntnis* 34: 297-322.

Horgan, Terence and Tienson, John. (1996) *Connectionism and Philosophy of Psychology*. Boston: MIT Press. (HT).

Potr, Matja . (1993) *Phenomenology and Cognitive Science*. Würzburg: Röll.