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Towards an Ontology of Common Sense

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Introduction

Philosophers throughout the ages, from Plotinus to Paul Churchland, have yielded to the temptation to embrace doctrines which contradict the core beliefs of common sense. Philosophical realists have on the other hand sought to counter this temptation and to vindicate those core beliefs. The remarks which follow are to be understood as a further twist of the wheel in this never-ending battle. They pertain to the core beliefs of common sense concerning the external reality that is given in everyday experience – the beliefs of folk physics, as we might call them. Just as critics of Churchland *et al.* have argued that the folk-psychological ontology of beliefs, desires, etc. yields the best explanation we can have of the order of cognitive phenomena conceived from the perspective of first-person experience, so we shall argue that (1) the commonsensical ontology of folk physics yields the best explanation we can have of our externally directed cognitive experience and that (2) an ontology of mesoscopic things, events and processes must play a role, in particular, in our best scientific theory of human action.

Our primary purpose in what follows will be to provide basic tools for a description of this 'mesoscopic reality', drawing on the one hand on the work of Fred Dretske, J. J. Gibson, Avrum Stroll and others on direct realism in perception, and on the other hand on studies in formal ontology in the wake of Husserl. The common-sense world, we shall argue, is not simply a cultural fiction, but a genuine and genuinely autonomous object of scientific theorizing. The ultimate vindication of this claim will lie in the fruits of the ontological theory of the common-sense world which it implies, fruits which should in the long run include a new understanding of perception and a new sort of semantics for natural language.

The Sciences of Common Sense

Common sense may be investigated scientifically in a number of distinct ways, which it will be important to keep clearly separate in the discussions to follow. Above all, we must distinguish between common sense

O1. as a totality of *processes*, within which we can distinguish various subtotalities of spoken language, reasoning, vision, etc.;

O2. as a more or less coherently organized *system of pre-scientific beliefs* (of folk physics, folk psychology, etc.), which are extractable from this totality of cognitive processes and which can be seen as playing a central role in the organization thereof;

O3. as the *world* (the system of reference-objects) to which the cognitive activities and beliefs in O2 primarily relate (this we can call the common-sense world, as contrasted with various specialist object-domains of non-everyday cognition – domains of mathematics, chemistry, astronomy, etc.).

This gives rise to a corresponding division on the theoretical side between:

T1. (scientific) theories of the processes in O1 (for example psychological theories of the workings of the human visual system);

T2. (scientific) theories of the naive belief-systems in O2;

T3. (scientific) theories of the objects in O3.

It is primarily with O3 and T3 that we shall be concerned in what follows. We shall argue that O3 is, modulo certain ontologically unproblematic differences of emphasis and calibration, culturally invariant, this invariance obtaining above all as a function of the similarity of human perceptual organs.

Delineationism

We shall conceive the external world of common sense as a product of *delineations* effected in the objective world of physics. Hence it will be possible for us to map the common-sense world – the pattern of salient boundaries in the world of extended nature – via the two central ontological disciplines of mereology (the theory of part and whole) and topology (the theory of contact, separation and connectedness).

An approach of this sort results from the conception of the common-sense world as the objectual correlate of everyday perception and from a conception of perception itself as 'direct' in the sense of involving no conceptual or theoretical intermediaries. Perception relates, on the view here defended, not to a conceptually or theoretically organized world, but rather to the *boundaries* or *qualitative gradients* in those sides or portions of the world towards which our perceptual organs are at any given stage directed. It might be argued against this that what counts as an entity for the purposes of everyday perception may depend on what concepts (sortals) are brought to bear in our perceptual experience. Thus, as Kelley (1986, p. 167) points out, 'we might not describe a person as having seen an X-ray tube unless he possessed an understanding of what an X-ray tube is'.

Matters are seen in a different light, however, when perception is conceived as a matter of recognizing salient boundaries and thus of picking out objects within the wider perceptual background. Certainly in the absence of relevant concepts and knowledge we may be less likely to focus our attention in the direction of an X-ray tube – less likely to find interesting just these and those boundaries in reality – but the focus of attention 'does not create entities where none in fact are.' Moreover 'the act of attention need not depend on a prior conceptual understanding of the things attended to. ... In the normal case, there are patterns in the stimulus array that are specific to the real entities around us, and allow us to discriminate them directly.' (Kelley, *loc. cit.*)

Common Sense and Physics

The delineationist approach yields a rather simple account of the relation between the external world of common sense and the world that is described in the textbooks of standard physics. It implies that at least the solid and non-solid *substances* and *stuffs* of the common-sense world are properly included within standard physical reality. Common-sense realism – the view that common sense is a system of beliefs true of a certain autonomous domain of reality – is thus of a piece with physical realism understood as the view that physics is a true account of reality at some deeper or more fine-grained level of structure. Delineationism implies further that the world of common sense is capable of being investigated in large part also by standard physical means. But it is consistent also with the (emergentist) thesis to the effect that there are features of the common-sense world of external reality which fall outside the purview of standard physics. Thus while the common-sense world must be *compatible* with standard physics, it may go *beyond* physics in certain harmless but important ways. Examples of the sorts of features which may be peculiar to common-sense external reality might include: formal-ontological structures and relations of certain sorts, shapes, holes, patterns and other similar structures, as well as colours, tones, etc., conceived as qualities of external things.

At the same time the common-sense world falls short of the physical world in virtue of the failure, for the totality of events given in common-sense experience, of the principle of causal closure. Not everything that is experienced as taking place in the common-sense world is experienced as having a causal history that is itself a part of this world. Meteorological phenomena, for example, are part of the external reality that is given in everyday experience, yet the causes of such phenomena are not a part of this reality. Hence also corresponding explanations are not available within the domain of common-sense.

Could common-sense realism be false?

One approach to this question is to consider what sort of evidence might count against it. Could we have good reasons – perhaps derived from physics or psychology – for embracing a thesis to the effect that our common-sense world view is false? Much has been made in this respect of psychological results relating to the domain of what we called O2 above. Thus Bozzi and others have shown that there exist systematic errors in our lay understanding of the behaviour of pendulums and other simple mechanical devices. (See Pittenger and Runeson) When we examine these and related results, however, we discover that, as far as concerns mereological and topological features of the relevant patterns of motion (as well as vectorial features relating, for example, to orientation and to the convexity or concavity of motion-paths, etc.), the lay understanding is in every case veridical. Our delineationist view implies, however, that it is precisely these non-metric features of physical reality which are inherited by common-sense reality; thus apparent local deviations from truth of common-sense beliefs in the sense of O2 can be accounted for without detriment to common-sense realism in relation to O3. Giving precedence in this fashion to mereological and topological features in our account of the reality that is given in common-sense experience is moreover supported by the work of cognitive linguistics such as Talmy and Langacker on the predominance of such features in the structures picked out by the grammatical forms of natural languages.

It is sometimes held further that there exist certain global incompatibilities between the view of reality that is dictated by standard physics and the view of reality of the layman. Yet physicists themselves have well-recognized techniques for explaining the mesoscopic properties of material bodies on the basis of their understanding of the corresponding microphysical structures. (Thus for example there is a well-established physics of colour.) Indeed, the absence of such techniques – or of the means for understanding how the microscopic and mesoscopic worlds are related together – would rightly be held to count against the claims of physics as a science of reality. Moreover, as Sellars and others have argued, our belief in the validity of the results of scientific experiments itself presupposes certain core beliefs of common sense. For this reason, too, therefore, it would seem that great difficulties are set in the way of our ever discovering scientifically that common sense is false.

Against Methodological Solipsism

The delineationist view implies a counterargument also to Fodor's thesis (1980) to the effect that, if our intentional experiences are to be conceived as 'direct', in the sense of being intrinsically of or about certain corresponding real-world objects, then the investigation of such processes would itself have to involve the investigation of those objectual targets themselves – in a way which would rule out the possibility of a *science* of psychology. For the latter, before it could formulate

laws of its own, would need to presuppose a theory of the objects of thought, and this, as Fodor puts it, would have to be a theory of everything. (Thus we could not construct a naturalistic psychology of reference unless we had some way of saying for example what salt is, which of its properties determine its causal relations with other things and with ourselves – and so on *ad indefinitum*.) Psychologists must, therefore, embrace the standpoint of methodological solipsism and hold that real world objects can play no role in the laws of psychological science.

Fodor's argument presupposes the absence, at every non-ultimate stage in the development of science, of any scientifically well-established account of the real-world objects which serve as the objects of our thoughts. The common-sense realist, on the other hand, insists that we are already, in the great mass of our everyday cognitive experiences, in unproblematic and systematic cognitive contact with a certain stable domain of objects in the world (here called 'common-sense reality'). On this basis it becomes possible to challenge the idea that a science of the objects of thought must be the whole of science, as Fodor presupposes. For to do justice, scientifically, to the objects of everyday cognition, it would be sufficient to develop merely that portion of the science of everything which relates to common-sense objects, and completion of this small portion of science seems at least a reasonable short-term prospect (cf. Hayes 1985).

This response to Fodor's argument will, certainly, involve rejecting the goal of a *nomological* science of everyday cognition, since the common-sense world, as we saw, is not causally closed. On the other hand, however, it is far from clear that even those research programmes in psychology which have been pursued on the basis of methodological solipsism have yielded results which lend substance to the idea that a nomological science of psychology is possible at all.

Anthropology

Our common-sense realist perspective receives further empirical support from the fact that, as anthropologists and others have shown, there is a non-trivial core of beliefs about external reality which is in large degree common to all cultures and societies. Such beliefs belong to what Robin Horton calls 'primary' theory, as contrasted with the 'secondary' theories (of a religious, mythical or scientific nature) which pertain to what lies beyond or behind the world that is immediately given in perception and action. Horton's account of primary theory harmonizes well with the delineationist perspective defended in the foregoing. Primary theory, as Horton puts it, 'gives the world a foreground filled with middle-sized (say between a hundred times as large and a hundred times as small as human beings), enduring, solid objects.' (Horton, p. 228) We also have complementary evidence from developmental psychology for the existence of this same universal core of common-sense beliefs as something that is shared by all human cultures. As Forguson shows, very many of the central features of common sense are acquired, *en bloc*, at around the age of 4, when the child manifests also a new qual-

ity of behaviour and of interaction with his fellows. And then, Forguson argues, 'The truth of our common-sense beliefs ... is the best explanation of the differential performance of 3-year-olds and adults in experimental conditions and also in natural settings.' (1989, p. 175)

A certain capacity to apprehend those basic delineational structures of reality which are relevant to its survival must indeed be inborn in any organism capable of learning. The human capacity to distinguish colours or shapes, for example, or to recognize similarities in the phenomena perceptually experienced, or to find some experiences more rewarding than others, *could not have been learned*, for such capacities are presupposed by any process of learning which would be conceivable for human beings. As Horton points out, 'after a long period of flirtation with a tabula rasa model of higher brain centres, human biologists seem inclined by more recent evidence to think that the brain has elements of genetically-programmed structure and physiology particularly fitted to seeing, thinking and talking in primary-theoretical terms.' (Horton, p. 234)

Thus we possess innately not merely the concepts of identity and difference, but also, and no less importantly, the capacity to apply these concepts correctly (in normal cases) to the things and events by which we are confronted in our everyday perceptual experience. (Macnamara) We possess innately the belief – triggered around the age of 4 – that there exists a world of objects and events external to and independent of our conscious experience. We possess innately also the belief that this world is a common, public possession, equally accessible to all, and we are born with an innate disposition not merely to employ language, but also to take it for a reliable means of mapping the types and individuals of this world. Isolated individuals (adolescents, philosophers, underground men) may fall away from beliefs of this sort for specific reasons of their own; as regards typical and normal human beings in typical and normal cultures and societies, however, the beliefs in question are entirely unproblematic.

Cultural Relativism

What of arguments to the effect that the common-sense world is a cultural artifact of Western science, a framework for organizing data which is presupposed by Western linguists, anthropologists and others and which is as it were foisted on the data obtained in the investigation of alien cultures in such a way as to make it appear that the common-sense world thereby 'discovered' amounted to a cultural invariant? Views of this sort seem to be implied by the work of philosophers such as Quine, whose thesis of the inscrutability of reference might be held to support the claim that we can never know the ontology of an alien interlocutor since we can never enjoy data that is free of our own ontological imputations. Yet Quine's very formulation of his own thesis uses terms such as 'language', 'reference' etc. as if the referents of these terms were themselves scrutable. Quine's own account thus lends inadvertant support to Horton's thesis that primary theory provides an indispensable bridgehead for the investigation of alien cul-

tures. Moreover, the Quinean doctrine of ontological imputation has been most vehemently dismissed as implausible by precisely those (the anthropologists of all nations) who have the most direct practical experience of the sorts of problems with which this doctrine ostensibly deals.

Mereology and Topology

The common-sense world, in summary, is neither a world consisting exclusively of atoms or elements in the sense of Leibniz or Mach, nor is it a single, unitary whole in the sense of Spinoza or Bradley. Rather, it is a world which is characterized by articulations or segmentations at different levels. Among the most prominent organizing principles of the common-sense world are the relations of mereology – of part to whole, of part to part within a single whole, of identity, overlapping and discreteness. To the mereological portion of the theory of common-sense reality there must be added also however a topological component – a theory of continua and boundaries. The substances (chairs, table, people) of the common-sense world are parts or sub-regions of physical reality which are not of interest to physical theory as such: they are of theoretical interest only for the non-intrinsic reason that they are of such a scale as to be directly graspable in human perceptual experience. These substances, and the associated states, events and processes, do however exist independently of human cognitive activities. They are marked at most by what might be called a delineation-dependent status, in the sense that it is our delineations – delineations dependent in part upon the detailed make-up of our cognitive apparatus – which serve to set the corresponding sub-regions of physical reality into relief against the background of physical reality as a whole. Our cognitive activities thus do not bring common-sense objects into being from out of nowhere. They serve, rather, merely to discriminate the relevant underlying matter in light of qualitative differences, and this matter is something which exists completely independently of our delineations.

Conclusion

The longer-term programme dictated by the considerations sketched above might be represented, in simplified form, as follows: we are to take common sense as our guiding clue equally in ontology, psychology, semantics and metaphysics. We thus get a folk ontology (effectively mereology and topology), a folk psychology (especially of direct perception), a non-solipsistic and anti-representationalist semantics, a rationalist anthropology (innate ideas and structures derived from *a priori* principles governing the phenomenon of learning), and finally a theory of cultural universals. Clearly, not everyone will wish to buy this list as a whole. The foregoing is to this extent a position statement, embracing a somewhat radical form of the common-sense realist view. To the extent that the

resultant mereological and topological analyses are successful, however, these analyses may be of interest even to those who defend more moderate positions. Thus for example they may be of interest to those who, while insisting that there is a significant cross-cultural or cross-linguistic diversity of common-sense ontologies, are nevertheless willing to admit that this diversity is constrained, for example by the fact that certain mereological and topological structures play a central organizing role in each. The delineationist view of common-sense reality may even be of interest to the idealist, who sees world and objects as *toto caelo* a product of mind or language. For even the idealist must surely admit that such products would be structured in certain ways, and I venture to assert that at least part of the story of such structurings would have to involve analyses along delineationist lines of the sort here canvased.

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