Editor's introduction

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This special issue, *The Scientific Turn: Studies in Materialism and Metaphysics*, collects a number of original articles dealing with philosophical issues concerning science and metaphysics in the intersection of the areas of ontology, epistemology, language, and mind.¹ The articles contained in this special issue explore different relationships between what Wilfrid Sellars (1963) called “the manifest image” and “the scientific image”. In this connection, the articles provide new assessments of contemporary debates about non-reductive physicalism and mental causation, information integration and phenomenal consciousness, substantialism and factualism in quantum mechanics, naturalism and perception, identity statements and natural kinds, truthmaking and dependence, and materialism and Aristotelianhylomorphism on the theory of knowledge.

The first article of the special issue is “Consciousness and Information Integration” by Berit Brogaard, Bartek Chomanski and Dimitria Electra Gatzia. It explores three main theories of consciousness for which the notion of information integration plays a central role for phenomenal consciousness: Information Integration Theory, Global Workspace Theory, and Attended Intermediate-Level Representation Theory. The main aim of the article is to show that, contrary to these theories of consciousness, information integration is neither necessary nor sufficient for consciousness. The authors argue that there is empirical evidence against such commitments.

In “The Scientific Turn In Metaphysics: A Factualist Approach”, Valerio Buonomo puts forward a defense of factualism, the view that the fundamental ontology of the world is an ontology of facts. To do so, he presents a criticism of substantialism, the conception according to which the world is a world of substances. In particular, Buonomo argues that substantialism does not fit well with fundamental physics. He attempts to show that substantialism cannot make sense of quantum mechanical entities framed in terms of substances and properties. Buonomo recommends an ontology of facts in which quantum mechanics can be accounted for satisfactorily.

¹ The expression “scientific turn” is Sellars’s. See Sellars (1968: p. vii).

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In his article “Perception Naturalised: Relocation and the Sensible Qualities”, Paul Coates argues for a naturalization of the theory of perception. His purpose is the articulation of a causal theory of perception, a theory in which the metaphysics of perception and the science of perception are continuous investigations on the nature of perception. Coates proposes a causal analysis of the perceptual relationship in contrast with the theories of naive realism and intentionalism. In this connection, he presents a defense of the Sellarsian relocation account of sensible qualities, which strongly relies on a causal theory of perception scientifically oriented.

Luis Fernández Moreno discusses two central views of Kripke’s theory of theoretical identities involving natural kind terms in “Language and Metaphysics: The Case of Theoretical Identities”. Namely, the rigid designation of natural kind terms, and essentialism about natural kinds. He argues that these two views present in Kripke’s theory are plagued with questionable assumptions about modality and philosophical analysis. For these reasons, Fernández Moreno concludes that Kripke’s theory fails to establish the truth and necessity of theoretical identities.

“Truthmaking and Fundamentality” makes a case for a theory of truthmaking including dependence relations and fundamental truthmakers as alternatives to the notions of grounding and fundamentality. According to John Heil, in contrast with the notion of grounding, the dependence of the identity of a whole, an ordinary object, upon the identity of its parts, the particles which makes it up, does not entail that there are two degrees of reality: fundamentality and non-fundamentality. For him, an advantage of truthmaking is that he can appeal to the fundamentality of physics without implying that there is a hierarchy of fundamental and non-fundamental levels of reality: the ordinary objects and the arrangements of elementary particles.

Walter Sinnott-Armstrong in “Contrastive Mental Causation” defends contrastivism about mental causation, a non-reductive physicalist account of mental causation based on the notion of contrastive causation, by which mental properties and physical properties can cause the same physical effects in contrast with different foils. He argues that the notion of contrastive mental causation has the capacity to solve relevant problems for non-reductive physicalist theories of mental causation, such as the problems of downward exclusion, redundancy, and overdetermination.

The last article of the special issue is “The Ontological and Epistemological Superiority of Hylomorphism” by Robert C. Koons. It defends Aristotelian hylomorphism, a theory of intentionality, knowledge, and cognitive normativity in contrast with materialism and extreme nominalism. According to Koons, neither the former nor the latter are capable of providing satisfactory accounts of these three human phenomena. He argues that both intentionality and knowledge presuppose normative facts, and normativity is fundamentally bio-teleological in character.

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