The Ontological Significance of Levels of Organization

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Abstract: ‘Levels of organization’ is a major organizing principle in the biological sciences that purports to provide a broad overarching thesis about the basic structure of the natural world. However, ontological accounts of levels have not met with wide acceptance, leaving open the question of what levels are. Building on earlier work demonstrating the epistemic usefulness of the levels concept, I turn here to considering how heuristic usage of levels might gain access to ontological content expressed by the concept. For this I will rely on Wimsatt’s and Eronen’s notions of robustness to show how epistemic access (via experimental detection and intervention techniques) to biological phenomena can result in systematically justifying ontological claims involving levels of organization. This results in an ontologically-informed account of the significance of levels that is capable of answering so-called “levels skeptical” arguments that the concept is fundamentally flawed or a misleading notion for philosophers and scientists.