McGill University
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Professor Victor Denenberg

Dear Vic

Thank you for your recent reprint and preprint. A hasty perusal of the former elicits two comments of a philosophical nature. The first is that, by defining an emergent property as one that cannot be derived from a knowledge of the components, you come under the attack of any rationalist who can retort: 'Not so fast; wait and see whether we do not succeed in explaining the whole by the parts.' You should distinguish the ontological from the epistemological concept of emergence. Emergence, whether explained or not, is still emergence if defined thus: "A property of a system is said to be emergent iff it is not possessed by its components". See my Treatise on Basic Philosophy, Vol. 4 , A World of Systems (Reidel 1979).

The second remark is that the "systems theory" proposed by Bertalanffy and others is not really a theory and moreover it is a heap of rather vaguely formulatéd theses, some of them apparently true, others false, and still others true only for macrosystems. The idea of finding general principles true of systems of all kinds was great, but the findings of people such as Bertalanffy and Miller seem to me to be paltry, and this because they confine their attention to macrosystems, pay no attention to randomness, and make no use of exact tools. For a different set of principles presumably applicable to all systems, small and big, physical and chemical, biological and social, see the above quoted book.

Best wishes for 1980 for both of you.

Cordially

Mario Bunge

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