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RESEARCH NOTE

WILEY SYSTEMS and BEHAVIORAL RESEARCH SCIENCE

Of wolves and dogs and other false distinctions: A rejoinder to Wallis

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In his "Commentary on Roth: Adding a conceptual systems perspective," Steve Wallis (in press) shares most valuable insights of how my article on the "prejudicial tendency for scholars to write in favour of 'open systems'" could be enhanced by a "conceptual systems" approach. Whereas there is very much correspondence between our lines of thought, there are certain discrepancies that deserve further comments.

The first issue pertains to Wallis' understanding of my main argument, which he knows to "relate to the difficulty of using one conceptual system (moral perspective/stance/code) to understand and choose another (open systems over closed)." In my article, I have indeed problematized the application of the moral code (good versus bad) to the distinction between openness and closeness in systems theory. My terminology, however, is different insofar as I would abstain from referring to codes and distinctions as conceptual systems.

Second, Wallis contends that "systems can be either physical or conceptual, or a combination of both." This distinction, however, truly is a false distinction. "Distinction is perfect continence" (Spencer Brown, 1979, p. 1). True distinctions are mutually exclusive and jointly exhaustive (Roth, 2019a). The two sides of Wallis' basic distinction, however, are obviously not mutually exclusive as he refers to overlaps between or mixed types of physical and conceptual systems. Moreover, the two sides are not jointly exhaustive either because there are systems that are neither physical nor conceptual. This is true for biological systems, the observation of which has triggered the very turn to open systems theory that was a main topic of the commented article (Roth, 2019b) and the special issue of SRBS on "Ludwig von Bertalanffy and his enduring relevance" (van Assche, Valentinov, & Verschraegen, 2019) it was published in. Moreover, in his comment, Wallis (in press) himself refers to yet another type of systems that are neither covered by nor can be reduced to either physical or conceptual ones: social systems.

Third, Wallis transcends or supersedes his basic distinction between physical and conceptual systems when he defines systems, in the words of Umpleby (2009), as "a set of variables selected by an observer." This is the moment when he actually defines systems, namely as analytic systems, and, thus, takes sides in a somewhat dated controversy between analytic and concrete systems theories (Luhmann, 2013, p. 39ff) that has increasingly been made redundant by the advent of autopoietic systems theories. In fact, one major implication of autopoietic systems theories is that organic, psychic, and social systems emerge as concrete systems by means of their self-/observation as/of analytic systems. In such a context, meaning is less about degrees of interconnectedness and equilibria between the individual elements of a system, but more an implication of the complexity differentials that result, not least, from the inevitable self-implication of any observing system in its object of observation. This and further aspects of the autopoietic condition systematically undermine the credo of "(m)ultiple streams of research" that "show that conceptual systems of more interconnected parts

have more meaning (are more useful for understanding situations)" (Wallis, in press), and it is worth mentioning that such simplistic *the more, the better* approaches contradict Wallis' own work, co-authored with Vladislav Valentinov (Wallis & Valentinov, 2017, p. 738), on sustainable theory and the "conceptual construct of the complexity-sustainability trade-off." At least part of this contradiction, however, might emerge because the observation of a trade-off between sustainability and complexity is not inherent to either complexity or sustainability but again based on a false distinction. A translation of this false into two true distinctions following the *tetralemmatization* strategies presented in Roth (2019a, p. 91f; 2019b, p. 284f) would clearly illustrate that systems are not necessarily *either* sustainable *or* complex but may also be *both* complex *and* sustainable or *neither* complex *nor* sustainable.

One of our colleagues in the systems community once explained me that all men are either wolves or dogs. This distinction, although a false one, carries our colleague through life and, as it does not cause any trouble, there is no point in ever contesting it. In fact, false distinctions are very useful, as they generate discourses and keep them alive.

The distinctions between physical and conceptual systems as well as between complexity and sustainability have proved very stimulating and have carried us very far and neither has caused any trouble before the detection of the above-mentioned contradiction.

The detection of such contradictions, however, is the moment when attempts at "measuring the structure of systems theory" (Wallis, in press) could be complemented by attempts at coding paradigm-neutral theory debuggers, which most probably require a digital transformation of both social and systems theory (Rivero Blanco, 2019; Roth, 2017, 2019a; Roth, Dahms, Welz, & Cattacin, 2019).

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FURTHER READING

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