

Foreword: Trends in Functional Differentiation

Steffen Roth

Social change can invalidate familiar definitions of society (Lee, 2000). The fundamental units of archaic societies were similar and coequal *segments* such as families, clans, and tribes until some segments started to exert larger influence on surrounding segments than others (see Table 1 in Roth & Schütz, 2015, p. 16). Although centrality is not necessarily an advantage, in many cases *centralization* has been the basis for social *stratification*, the latter of which is characterized by the distinction of neither similar nor equal strata like castes, estates, or classes. Rules of kin- and clanship continue to apply in stratified society, however, now only within the margins of stratification. In spite of a still strong prevalence of hierarchies, most prominently Niklas Luhmann (1977, 1987) has argued that a *functional differentiation* of both dissimilar and equal subsystems has replaced stratification as dominant form of social differentiation. In the same breath as organization, the distinction of function systems such as the political system, the economy, science, art, religion, law, sport, health, education, and the mass media is therefore said to be the key principle of modern society (Baecker, 2007; Beck, Bonss, & Lau, 2003; Beck & Lau, 2005; Bergthaller & Schinko, 2011; Brier, 2007; Guy, 2013; Kjaer, 2010; La Cour, 2006; Laermans, 2007; Schirmer & Hadamek, 2007; Sevänen, 2006; Smart, 1990).

Modern social theories and sciences in general and sociology—the *science of modernity* (Giddens, 1996), in particular—however, imply rather than apply functional differentiation and remain preoccupied with the cross-tabling of variables associated with earlier forms of differentiation. This is not to assume that sociology does not at all take the key categories of modern society into account. Looking for sociological core concepts, Keith and Ender (2004) analyzed 16 and 19 sociological textbooks from 1940 and 1990, respectively, and identified six of ten function systems, namely education, politics, religion, the economy, health, and science, as core concepts of sociology. Another meta-analysis of English-language articles indexed in the Sociological Abstracts database between 1970 and 1999 by James Moody and Ryan Light (2006) also suggests that art, health, science, education, and the legal system play a major role in sociological discourses. Still, the same studies also unveil that functional differentiations are clearly not as popular as the analysis of more classical categories such as race, culture, family, gender, class, or sexuality. This appraisal is also supported by a JSTOR full-text search of common sociological terms (David, 2005) and by a comparison of French and British sociology textbooks (Schrecker, 2008). References to function systems are cursory rather than systematic, with most publications centering one or a few function systems without much further

reflection on why the focus is on the observed and not the other function systems. The key variables of modernity hence remain blind spots or theoretically motivated constants of most sociology.

The problem with this conceptual gap is that social theories and sciences have always featured a trend toward the observation of trends in functional differentiation such as the secularization, politicization, mediatization, aestheticization, juridification, or, most popularly, the economization of society (Alexander, 1985; Alexander & Colomy, 1990; Blumler & Kavanagh, 1999; Çalışkan & Callon, 2009; Chomsky, 1997, 1999; Habermas & McCarthy, 1985; Lash, 2007; Polanyi, 1957; Roth, 2015; Thompson, 2006; Urry, 2010; Wallerstein, 2004). These trend statements, however, inevitably call for a systematic reflection not only on the individual trends, but also on the full concept of functional differentiation. The observation of an increasing economization, for example, does not indicate an economized society if the context of this economization is an even more politicized society. Unsystematic trend statements therefore risk being not only ethnocentric (Pérez-Agote, 2014), but also remaining contingent on preconceived beliefs on the importance and unimportance of particular function systems. It is therefore both no surprise and a veritable research problem that the other key concept of modernity, organization, is predominantly associated with power (Negro, Koçak, & Hsu, 2010), and not belief or beauty; and that it is economic organizations that most colleagues tend to study nowadays (Bort & Kieser, 2011; Courpasson, 2013). In readily zooming in on political and economical issues, most social theories and sciences perform rather than study an assumed political and economic bias of modern societies,¹ thus projecting it to the future. Emerging *culturomic* research on trends in functional differentiation (Roth, 2014), however, suggests that it is better to exercise caution when it comes to the definition of modern societies as economized, and a look at the role of religion in earlier and distant societies also suggests that the importance of individual function systems to particular societies is, and always has been, subject to change. The challenge is hence to explore which directions this change may take in the future (Roth & Kaivo-oja, 2015).

So far, explorations of this kind have been complicated not only by a lack of pertinent methodologies, but also by the entirely correct idea that no function system is essentially more important than another (Jönhill, 2012; Vanderstraeten, 2005). Yet, this contradiction can be resolved by assuming “that it is not despite, but because of their basic equivalence that function systems can be ranked at all because if the function systems were essentially unequal, they would already be ranked and, therefore, could no longer be ranked” (Roth, 2014, p. 35). The fundamental equivalence of the function systems may therefore be treated as a prerequisite for (rather than a result of) research in the relative importance of individual function systems and the corresponding trends in functional differentiation.

1. The plural refers to subsystems of society.

The first article in this special issue, “Ten Systems: Toward a Canon of Function Systems” by Steffen Roth and Anton Schütz, delves into the conceptual foundations of such *interfunctional social research*. Our main concern is how function systems may be distinguished from non-function systems and, thus, also how many function systems actually exist. We develop our canonical answer to this question in reference to Niklas Luhmann’s distinction of observer perspectives (Luhmann & Barrett, 2013, p. 96), which we use to distinguish function systems from performance systems and reflection systems. Based on this, we identify what we ironically call a “canon” of ten function systems, for which we also present the corresponding media, codes, and programs. We assume that our disciplined approach to functional differentiation facilitates further interfunctional comparative social research, one example of which is the second article in this special issue.

In “Societal Self-Observation in the Time of Datafication: Interfunctional Analysis of the Chilean Open Data Web Portal,” Maximilian Heimstädt presents his analysis of the *Portal de Datos Públicos*, an open data web portal that makes large amounts of Chilean governmental datasets available to the public. He finds that this datafied political self-observation of the Chilean society features a strong bias to political and economic categories as well as a complete neglect of religion. Surprisingly, health plays a strong role in this political economic vision of the Chilean society, too, which is even more surprising because the same bias to politics, economy, and health combined with a thorough neglect of religion can also be observed in leading futures and foresight studies journals (Roth & Kaivo-oja, 2015).

Claudia Ritzi and Matthias Lemke further zoom in on the political economic bias of societal self-observations. In their article, “Is There No Alternative? The Discursive Formation of Neoliberal Power,” the authors follow a blended reading approach combining text mining and manual reading of the Leipzig Corpus Miner as well as four major German newspapers to analyze whether the so-called TINA rhetoric claiming that there is no alternative to neoliberal capitalism has been dominant in the German political discourse from 1947 through 2012. Their results show that the neoliberal rhetoric is both influential and non-/hegemonic because it is countered by a strong critical meta-discourse on negative impacts of neoliberalism on the German society. In this sense, their research also empirically supports the idea that capitalist self-descriptions of modern societies are co-performed by both capitalists and anti-capitalists (see Roth, 2015).

The voice off in this special issue of *Cybernetics and Human Knowing* is a noise off this time: Justine Grønþæk Pors’ text, “Is the system badly named? Noise as the paradoxical (non-) foundation of social systems theory,” may be read as a preferably constant reminder of the paradox nature of observation. In revitalising the concept, she observes noise not merely as an external disturbance, but also as a system’s resource. She thus opens the observation of autopoietically closed systems insofar as she observes that particularly sophisticated systems may observe noise as disturbance located on the other side of their own constitutive distinction and, thus, as their own piece of information.

Justine's reminder is critical as we may indeed consider functional differentiation to be particularly disturbing, although not yet noisy information in modern social research in general and social systems theory in particular. This is true because, within our own theory of difference and differentiation, we are dealing here with a form of differentiation that still emerges through a cross-tabling of classical sociological distinctions (see Table 1 in Roth & Schütz, 2015, p. 16) rather than a re-entry of earlier forms of social differentiation. In this particular way, functional differentiation is still challenging our otherwise well-oiled theory machine, while with regard to the more general discourses in social theory and science we may again state that interactions and interplays of function systems are as under-researched as are the interfaces of functional differentiation and the earlier forms of differentiation. The prospects for interfunctional social research could not be better.

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Regular Features

Søren Brier & Phillip Guddemi

After Ranulph Glanville’s death we still wanted to continue our tradition of having two experienced columnists taking turns. I was therefore looking for someone who could bring us even more transdisciplinary insight and who knew systems, second-order cybernetics and Peircean semiotics and could relate them to science in general on one hand and art, humanities and spirituality on the other. There are not many such people around. However, some years ago I was fortunately to come across the work of Basarab Nicolescu, a Rumanian quantum physicist who has been working at Université Pierre et Marie Curie in Paris. He has written *The Manifesto of Transdisciplinarity* as well as a book on the cosmology of Jakob Boehme (Böhme) called *Science, Meaning and Evolution*. He runs *The International Center for Transdisciplinary Research* (CIRET) in Paris (http://ciret-transdisciplinarity.org/index_en.php). As with Glanville, I am awed by the depth of his insight in science, art, humanities, and spirituality combined with his clarity of writing. This column has so far been question-driven by me, but you can suggest questions to me by email (sb.abc@cbs.dk). The first column presents Nicolescu’s revolutionary transdisciplinary ontological view of *the Hidden Third*.

In this issue’s ASC column, Pille Bunnell provides us with a guide to dancing with ambiguity. The topic of ambiguity may be a response to recent contributions by

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The Artist for this issue is Lev Manovich. Full color art at www.chkjournal.org

Cover Art

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