

# Chapter 10

## Fashionable Functions: A Google Ngram View of Trends in Functional Differentiation (1800–2000)

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### ABSTRACT

*Computer communication is revolutionizing modern society to the same extent as the invention of writing or the printing press have unsettled the archaic or the ancient society, respectively. In the present article, this idea will be exemplified by a demonstration of how the Google Ngram viewer – an online graphing tool which charts annual counts of words or sentences as found in the largest available corpus of digitalized books – allows for checks and challenges of familiar self-definitions of modern society. As functional differentiation is considered the central unique feature of modern societies, the hypotheses focus on the testing of prominent modern trend statements and predictions, such as the secularization, politicization, economization, and mediatization of society. All hypotheses are tested through a comparative analysis of word frequency time-series plots produced by means of the Google Ngram Viewer. The results show that the importance of individual function systems to society features significant change in time and considerable regional differences. Furthermore, the findings suggest adopting a skeptical position on some of the most frequent common senses of trends in functional differentiation and corresponding self-definitions of society.*

### INTRODUCTION

In his opus magnum *Die Gesellschaft der Gesellschaft*<sup>1</sup>, Niklas Luhmann (1997a) makes the case for the claim that the emergence of computer communication is about to challenge modern society in the same fundamental way as the inventions of writing or the printing press have changed the face of the archaic or the ancient

society, respectively. The basic idea behind this claim is that new dissemination media allow for new forms of self-observation, a fact that finally results in a new identity. In the present article, this idea will exemplified by a demonstration of how the Google Ngram viewer – an online graphing tool which charts annual counts of words or sentences as found in the largest available corpus of digitalized books – allows for checks and chal-

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lenges of old familiar self-definitions of modern society. The starting point of this venture is the distinction between autonomous function systems such as the economy, science, art, religion, etc. In fact, this form of functional differentiation is considered a core concept of modern societies (Leydesdorff, 2002; Beck et al., 2003; Berger, 2003; Vanderstraeten, 2005; Brier, 2006; Baecker, 2007; Kjaer, 2010; Bergthaller & Schinko, 2011; Jönhill, 2012). Without functional differentiation, there would be no difference between truth and money, a hospital would be considered the same as a bank, and there would be no sense in the critiques of doping, corruption, or the selling of indulgences. In like manner, the larger part of contemporary definitions and criticisms of modern society would have to do without their most basic categories, since all observations of secularization, economization, and mediatization implicitly refer to an underlying concept of functional differentiation.

Though generally accepted, the idea that particular function systems are more relevant to society than others is not understood without ambiguity. On the one hand, in the light of the fundamental equivalence (Vanderstraeten, 2005; Jönhill, 2012) and autonomy (Tsivacou, 2005; Valentinov, 2012) of the function systems there is no way of arguing that the political system or the economy is essentially more important than religion or sport, per se. On the other hand, there seems to be plenty of empirical evidence of such imbalances in terms of the just mentioned trend observations.

This contradiction can be resolved by stating 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. In this sense, the function systems can be treated as nominal data that feature a skewed distribution whenever it comes to the analysis of concrete segments of society. Hence, modern societies so

far have been defined in terms of different biases to particular function systems with the most prominent cases being the definition of society as capitalist. Though there is still little consensus on the question of whether capitalism results either from the primacy of a particular form of politics or from the primacy of the economy (Risse, 2003; Wallerstein, 2003; Foucault, 2008; Urry, 2010; Lash, 2007), most people would basically agree on the idea that present societies are subject to an economization of collective goals (Alexander, 1985). This “increasing influence of economic factors and values on the political agenda and other areas of society” (Blumler & Kavanagh, 1999:210) includes the economization of:

- Health (Musick, 1999; Cartier, 2003);
- Art (Behnke, 2007; Velthuis, 2003; Kjaer, 2010);
- Science (Penders et al., 2009);
- Religion (Robertson, 1992), and, as a matter of course;
- Society as a whole (Habermas & McCarthy, 1985; Altvater & Mahnkopf, 1996; Chomsky, 1999; Polanyi, 1957; Schmidt, 1993; Enderle, 1997; Finch, 2007; Sayer, 1999; Schimank & Volkmann, 2008).

As a result of this “economic turn” (Smart, 2003) or fetishization of the economy (Foucault, 2008), economization emerges so omnipresent and dominant that even the proliferation of economics is taken for an indicator of economization (Çalışkan & Callon, 2010)<sup>2</sup> or a need of de-economization (Latour, 2004), respectively. Nonetheless, there is also discussion on further forms of trend statements and predictions, which includes sometimes concurrent, sometimes competing definitions of society as mediatized (Dennis, 1978; Eaman, 1987; Castells, 1996; Chomsky, 1997; Blumler & Kavanagh, 1999; Croteau & Hoynes, 2003; Schulz, 2004; Hjarvard, 2008; Mazzoleni, 2008), politicized (Chomsky, 2000; Blumler & Kavanagh, 1999), intellectualized

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