

Roth, Steffen

**Article — Accepted Manuscript (Postprint)**

## Free economy! On 3628800 alternatives of and to capitalism

Journal of Interdisciplinary Economics

*Suggested Citation:* Roth, Steffen (2015) : Free economy! On 3628800 alternatives of and to capitalism, Journal of Interdisciplinary Economics, ISSN 2321-5305, Sage, New Delhi, Vol. 27, Iss. 2, pp. 107-128,  
<https://doi.org/10.1177/0260107915583389>

This Version is available at:

<https://hdl.handle.net/10419/110613>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

# Free Economy! On 3628800 Alternatives of and to Capitalism

Journal of Interdisciplinary Economics  
27(2) 1–22

© 2015 SAGE Publications India

Private Limited

SAGE Publications

sagepub.in/home.nav

DOI: 10.1177/0260107915583389

<http://jie.sagepub.com>



**Steffen Roth<sup>1</sup>**

## Abstract

Even the sharpest problem focus cannot help but sharpen the problem. Thus, the key to our understanding of alternatives to capitalism and alternative forms of capitalism is not in the ongoing problematization of the dominance of the economic principle. Rather, the question addressed in the present form theoretical argument is about which distinctions we need to draw in order to be able to observe capitalism. Answering this question, we show that the form capitalism can only be unfolded in the medium of functional differentiation. In resituating the economy as only one out of ten function systems, we demonstrate that both pro- and anti-capitalist concepts of society imply an economy-bias and, consequently, a neglect of the remaining function systems. We therefore suggest that the observation of both alternatives to capitalism and alternative capitalisms calls for a stronger focus on the non-economic function systems. Finally, we present an outlook on a way to more than three million alternatives of and to capitalism.

## Keywords

Capitalism, form theory, functional differentiation, systemic constellations, paradox

---

<sup>1</sup>Professor of Management and Organization, Faculty of Sociology, Yerevan State University, Yerevan, Armenia.

---

## Corresponding author:

Steffen Roth, Professor of Management and Organization, Faculty of Sociology, Yerevan State University, 0025 Yerevan, Armenia; Department of Management and Organization, ESC Rennes School of Business, 35000 Rennes, France.

E-mail: [steffen.roth@esc-rennes.com](mailto:steffen.roth@esc-rennes.com)

## **A Reintroduction to Capitalism**

Strictly speaking, capitalism is boring. ‘You hear it once, you master the idea. The notion of devoting your life to it is horrifying if only because it’s so repetitious. It’s like sex.’ (William Frank Buckley, Jr. in Robin, 2004). Logically, larger parts of the world population are addicted to this peculiar game. Capitalism is indeed easy to play: All we need is a first team of players who consider capitalism to be the fast lane to the most existential, social and environmental problems, and the solutions to which it must be considered by the other team. Needless to say that the game is more fun if the playing field is the entire globe, and even more so if the field is crisis-shaken from time to time just because crisis have repeatedly been observed to trigger the player instincts particularly of the team anti-capitalism, which ‘lies dormant for years, then rushes back onto the scene in a brand new outfit and under an assumed name’ (Klein, 2002).

The key problem with capitalism, however, is that so far anti-capitalism has proved to be unable to win the game. Despite the fact that anti-capitalism is said to be as old as capitalism and, hence, the game itself (Tormey, 2012), anti-capitalism seems to only follow the fashions of capitalism and the trade cycles of the capitalist society rather than setting the pace. Capitalism, in contrast, appears hyper-adaptive and capable of growing with anti-capitalist criticism (Boltanski & Chiapello, 2005) even in times when ‘forms of global capitalism have lost their semi-sacred aura’ (Ossewaarde, 2012: 144). Despite its presumably insoluble inner tensions, capitalism always seems to be ahead by a nose if it comes to the power of naming (in) the liquid modernity, while anti-capitalism plays the cheerless and paradox role of critically evoking the opalescent ghost of capitalism as an auto-immune ‘system without an outside’ (Bousquet, 2002: 224).

The aim of the present article is to make a case for the thought that anti-capitalists serve neither society nor the planet by playing the role of the cheerless cheerleaders of capitalism, and that the higher goals of anti-capitalism can only be achieved if anti-capitalists master their ludic drives and direct them to a different game. In this sense, we indeed start from the assumption that anti-capitalism is not and cannot be about the overcoming of capitalism, but only about a negative criticism of capitalism that eventually adds to the evolution of capitalism as much as positive criticism does. In other words, we assume that capitalism is talked into life and maintained by both capitalists and anti-capitalists. Even though our approach to alternatives of and to capitalism is also explicitly focussed on strategies of its overcoming, our mission should therefore not be taken for an anti-capitalist venture. Rather, we will use

our own ennui with capitalism as a creative resource to ‘to a certain degree avoid communicating cemented beliefs’ (Harrebye, 2013: 3) on the unbroken urgency of anti-capitalist criticism and to develop an un-definition of capitalism that allows for the observation of new forms of capitalisms and beyond-capitalisms. This un-definition will be unfolded against the background of a form-theoretical argument on the inherently paradox nature of observation in general and the observation capitalism in particular. In doing so, we will demonstrate how to solve a number of observed paradoxes of capitalism into the more general paradox of observation. This observational shift allows for higher observational flexibility, which we will use to illustrate that the concept of capitalism inevitably refers to functional differentiation, a still under-researched form of social differentiation said to be the prime form of differentiation of modern societies, against the background of which capitalism can be observed as both a bias to the economy and a neglect of further function systems of society such as art, science, sport, health or religion. Thus, capitalism is not overcome by a criticism of the pro-economy bias, but rather by an increased interest in these so far neglected function systems. This shift of our attention away from the supposed problem system—the economy or an economy-biased political system, respectively—is perfectly in line with common practice in systemic therapy, where the defocusing of index patients or ostensible problems is regularly used to open up new spaces for therapeutic interventions. In our context, the proposed defocusing of the economy will unveil that the capitalist bias is a feature of a contingent constellation of function systems rather than a feature inherent to the supposedly dominant economy. Observers who observe problems with a supposedly dominant economy are therefore advised to not focus and confirm the economic dominance, but rather to break with the stately old economy and society perspective and draw their attention to other function systems of society. We finally conclude that capitalism will be history as soon as considerable numbers of observers have followed this advice.

## **The Paradox of Capitalism**

The following theory statement also represents a methodology statement. In doing so, it starts with the assumption that the categorical separation of theory and method is a mistake (Elias, 1978). Rather, we assume that theory also is a methodology as soon as it applies its own distinctions not only to its objects of observation, but also to itself, because such a theory-method indicates how its observations come about and can

be replicated. Rooted in a culture of self-application and a circular epistemology (Schiltz, 2007), research ventures based on social systems theory can consequently be considered methodologically robust, which is even truer if this research accounts for the form theoretical background against which social systems theory is developed. The intention of such an approach is then neither theory testing nor theory discovery, but rather the application of theory as a method of discovery.

Our present discovery of alternative capitalisms and alternatives to capitalism starts with a doubtless appreciation of epistemological doubt. According to form theory (Spencer Brown, 1979)—one of the most condensed introductions to which is available in Reichel (2011)—observed paradoxes and tensions are not in the objects of observation, but rather a matter of the form of observation itself. In fact, form theory starts from the observation of the fundamental paradox involved in every form of observation, which is in the fact that every observation of something is performed on the basis of the distinction of this something from something else: ‘We take as given the idea of distinction and the idea of indication, and that we cannot make an indication without drawing a distinction. We take, therefore, the form of distinction for the form’ (Spencer Brown, 1979: 1). Observing something means simultaneously drawing a distinction and pointing at one side of the distinction. This represents an inherently paradox operation in which a duality is both unfolded and indicated as a unity. The starting point of form theory is hence already a movement, that is, the oscillation emerging from the observation that everything that appears is appearing only due to an indication which is based on the distinction of distinction and indication (Kauffman, 1987b: 58).

The fact that there is a general paradox in every observation proves beneficial whenever our observations are bound by the observation of particular paradoxes. If we follow the idea that there is a paradox in the observation, then we find that we observe a paradox whenever an observation points at the observation itself. Once we have accepted this idea, we realize that every paradox can be solved by means of a new observation, that is, by replacing an observed paradox with another. In our context, this means that paradoxes of capitalism point at the respective observations of capitalism themselves as well as the circumstance that particular paradoxical observations of capitalism can be solved into the observation of more general paradoxes. We will illustrate this procedure with regard to the following set of paradoxes of capitalism.

A first fundamental paradox involved in the observation of contemporary capitalism is that the ‘insatiable and fundamentally unchangeable

monster' (Larsen, 2011: 51) of capitalism is so often referred to as alternativeless even, and especially, by its critics. Condering an observation alternativeless, however, is obviously a paradoxical operation because it claims that the form capitalism both can and cannot be observed in the medium of decision. Hence the second paradox, which is in the circumstance that capitalism proves highly adaptive and superior to anti-capitalist criticism, the latter eventually helps to grow rather than to overcome the first (Boltanski & Chiapello, 2005; Klein, 1999). This problem, however, is in capitalism only insofar as an observation of capitalism cannot help but being uncriticizable if it is observed without any alternative. To this issue add two more fundamental strategic disadvantages of anti-capitalism: The first is that anti-capitalism inevitably starts with drawing the distinction between capitalism and non-capitalism and first indicates the capitalism-side of the distinction. Anti-capitalists therefore have to fulfill the double-task of first adequately defining capitalism and then deducing corresponding anti-capitalist scenarios, while capitalists can focus exclusively on working on the indicated side of the capitalist distinction. Even worse, it is not only that capitalists can use the time in which anti-capitalists are working on the unmarked side of the distinction to redefine the marked side of capitalism, but also that every observation of the unmarked side of capitalism changes the nature of the distinction and, thus, also the shape of the marked side of capitalism. In other words, the oscillative nature detected by anti-capitalist observations of capitalism is due to nature of anti-capitalism's own form of observation. In looking for alternatives to capitalism in terms of anti-capitalism, anti-capitalism thus creates its own problems, among which may be counted the observation of 'the principle that critique, in seeking to be effective, tends to become isomorphic with the objects it is applied to' (Boltanski & Chiapello, 2007: 518), and deprives itself from the solutions it is actually aiming for.

Forms of observation that aim for the overcoming of capitalism are therefore well-advised to not observe capitalism in terms of anti-capitalism. Because our focus is on such defocus, our discussion of alternative forms of capitalism and alternatives to capitalism will not start from a more or less adequate definition of capitalism. And as long as it is safe to assume that the observation of capitalism is about the observation of an economy-bias, it will be enough for our purpose to use the term as a proxy, with the focus of our interest being on the question of what distinctions we need to use in order to be able to at all observe capitalism.

## **Capitalism and Functional Differentiation**

In whatever form of definition, the term capitalism refers to the observation of a dominant position of the economy within a given society. In doing so, capitalism inevitably refers to functional differentiation, that is, a still under-researched form of social differentiation based on the distinction of autonomous function systems (such as religion, art, science, the political system, or last but not least the economy), which is said to have replaced former forms as the dominant form of social differentiation in the course of modernization (Beck, Bonss, & Lau, 2003; Bergthaller & Schinko, 2011; Kjaer, 2010; Luhmann, 1977; Luhmann, 1990; Martens, 2006). The observation of capitalism therefore appears only against the background of a historically contingent and rather recent form of social differentiation.

Talking of social differentiation in general, the most basic distinction we can draw is the distinction of similar and dissimilar social systems (Luhmann, 1977), with social systems in our context being well-defined as position markers of social realities (Luhmann, 1995: 12). In a second step, we may then add the distinction of equal and unequal systems. This cross tabling<sup>1</sup> of only two distinctions already creates a strong tie to the core concepts of fundamental works on social differentiation (Durkheim, 1933; Marx, 1867; Spencer, 1895; Tönnies, 1887). All seminal works on mechanic versus organic solidarity, association versus organization, homogeneity versus heterogeneity, natural state versus alienation, or community versus society, eventually follow and cross lines of distinctions drawn by observations of similarities and dissimilarities. Accordingly, there is consent that identity followed similarity in archaic societies. Observations of the second distinction, however, are more controversially discussed (Cattacin, 2001: 7, 14; Giddens, 1973: 230). A Durkheimian tradition of sociology considers inequalities avoidable side effects of an evolutionary process of increasing specialization, whereas a Marxist tradition considers inequality to be an inevitable outcome of specialization and therefore calls for a fundamental reengineering of an essentially misrouted trajectory. Still, in either case we find that a cross-tabling of the two distinctions 'dis-/similar' and 'un-/equal' is all it takes to design one of the briefest possible mappings of historical and present forms of society (cf. Table 1).

Table 1 illustrates how the cross-tabling of the distinctions dis-/similar and un-/equal creates the basic forms of social differentiation: segmentation, centralization, stratification and functional differentiation. The first known forms of social subsystems were families and tribes,

**Table I.** Social Differentiation

		Equal	
		+	-
Similar	+	Segmentation (Families, tribes, nations, etc.)	Centralization (Civilizations, empires, etc.)
	-	Functional Differentiation (Economy, Science, Art, etc.)	Stratification (Castes, estates, classes, etc.)

**Source:** Updated from Roth (2014a, p. 442)

which co-existed with other families and tribes. The dominant principle of system-building was ‘either descent or settlement or a combination of both’ (Luhmann, 1977: 33). In this sense, early societies were differentiated in similar and even segments. During the Neolithic revolution, the situation changed insofar as some segments started to function as centres, which turned others into peripheries. This second form of differentiation was soon superposed by the formation of hierarchical social orders, such as the Indian caste system or the Occidental Estates of the realm. These shifts of forms of differentiation, however, do not imply that latter forms eliminate the earlier. Rather, we need to assume that newer forms interfere with the older. For example, in a family normally elder people punish the younger. In stratified societies, this rule might still apply, however, now only within the margins of the new rules imposed by stratification: It has become unimaginable that an elder farmer punishes even the youngest member of a noble family (without being entitled to do so by an elder member of that noble family). In stratified societies, persons are defined into ranked heredity communities, thus allowing for only limited social mobility. Mobility in terms of the movable types of the Gutenberg’s press, the Central-European rural exodus, or the gentrification of too many commoners, however, finally weakened the constitutive distinction of nobles and commoners until stratification for its own part was superposed by functional differentiation. In times of functional differentiation, it is thought to be inappropriate to consider a noble analphabet a better researcher as compared to a genius of humble beginnings. In spite of all the still strong presence of hierarchies, the distinction of eigen-logic function systems such as the political system, the economy, the legal system, science, religion, or art—is therefore said to be the current dominant form of social differentiation. ‘Functional differentiation selects communication processes around special functions to be fulfilled at the level of the society itself’



(Luhmann, 1977: 35). As an epiphenomenon of modernization, these functions have evolved in terms of communications centred on universal communication media. ‘Money: nowhere, visible thing, nowhere, invisible relation’ (Bay, 2012: 43), for example, has become the symbolically generalized communication media of the economy (Luhmann, Holmes, & Larmore, 1982). Further communication media include, for instance power (the political system), truth (science) or belief (religion), whose application recodes communication according to the respective function. Functional differentiation thus adds code values to potentially every single aspect of social life, hence multiplying social realities and constantly recreating the augmented reality of modernity. Such, the communication media have turned the former universe into a multiverse. In fact, the point of functional differentiation is its multi-inclusive nature: While elements of earlier social subsystems could only belong to one subsystem (e.g., a nobleman could not have at the same time been a commoner), one and the same social event can now simultaneously be economized, politicized and mediatized. What is more, we find that the function systems are incommensurable by nature, which is indicated by the fact that we cannot, just by implication, assume that science is essentially more important than politics or religion, or the economy more important than art or sport.<sup>2</sup>

If we now go on observing capitalism through the lens of functional differentiation, then we find that this observation unfolds not only a capitalist universe, but also inevitably the entire multiverse of functional differentiation, in which the capitalist pro-economy bias is only one contingent form of observation that we can perform. In this sense, we agree with the ‘artistic critique [...] traditionally having its social basis among intellectuals and artists who believe that capitalism reduces individuals to one-dimensional beings’ (Wennerhag, 2010: 35), however, not without pointing at the fact that an artistic movement with a political goal is as good or bad a way of challenging capitalism as educational efforts towards more religiousness.

## **Systemic Constellations of Capitalism and Beyond**

If we resituate the capitalist universe within the multiverse of functional differentiation, then we immediately find that alternatives to capitalism are not a matter of an ever-more intensive encounter with capitalism,

but rather of an increased interest in the non-economic function systems. In fact, such an approach is very much in line with what has been practiced for decades in the context of systemic therapy or consulting of couples, families or organizations where the basic idea of breaking deadlocked problem constellations by means of a defocusing of the index patient or index problem has proved beneficial in the most different contexts (Falloon & Pederson, 1985; Jackson & McKergow, 2002; Ropers, 2008; Sparrer, 2007; Suvarierol, 2006; Whittington, 2012).

In defocusing the economy and refocusing the remaining function systems, we find that the political system is said to play a major role in the maintenance of capitalism. In fact, it is a common anti-capitalist topos to consider a number of political movements as backers of capitalism. On the other hand, as mentioned above, it is, of all, anti-capitalist movements that play a major role in maintaining capitalism by means of evoking the very spirits of capitalism they claim to exorcise. This 'politico-economic' problem focus is further backed up by religion whenever this pope or that bishop criticizes the tyranny or dictatorship of capitalism (cf., for example, Pope Francis' official statement of 21 May 2013)<sup>5</sup>. Last but not the least, scientists are active in performing capitalism (Çalışkan & Callon, 2009; Callon, 1998), be it in terms of the design and defence of capitalist models of society, in terms of well-meaning attempts to challenge these and to re-embed the boundless economy by means of, as a matter of course, more political and not more religious, artistic or sportive regulation. Thus, by contributing to the tug of war between the political system and the economy, the larger parts of the social forces do whatever is necessary to cultivate the self-image of the capitalist society, and they do so simply by keeping the problem emphasis on this dated economy and society focus (Holton, 2013; Parsons & Smelser, 1998; Swedberg, 1990) that recently gave rebirth to the economic sociology. The problem however, is not only in the short-circuit that identifies society with the politically shaped nation states that claim to represent it, but also simply in the 'and Society', that is the fact that '(o)ther social institutions are seen (once again) as mere puppets in the hands of powerful economic trends and actors' (Stehr, 2002: 4). Consequently, the question of what 'and Society' means is more than ever relevant, especially if we believe the resources to overcome capitalism to be located within this 'and Society'. The future challenge of research aiming at the overcoming of capitalism is hence in the identification of both the remaining function systems and the general interplay of function systems. Although there is still little consensus on the definition of function systems, in looking at existing working definitions and compilations of function

systems (Andersen, 2003; Baecker, 1994; Künzler, 1987, 1989; Luhmann & Barrett, 2012; Reese-Schäfer, 1999), a hard-core list of 10 function systems can be identified (Roth, 2014d): the political system, the economy, science, art, religion, law, health, sport, education and the mass media system.

Focussing the interplay of these 10 systems rather than just the performance of the presumably most popular player, we soon find that economy has not been consistently at the centre of our attention. In fact, a number of self-definitions not only of previous but also of contemporary societies are centred on religion rather than on the economy. Against the background of the fact that observers of capitalist societies would just need to simply look back or around in order to come across alternatives to capitalism, the assumed alternativelessness of capitalism is in need of explanation and refers once more to the mode of observation rather than to the object of interest.

Our own interest, however, is not in giving reasons for the contemporary economy bias in the observation of modern societies or the self-inflicted failure of seriously observing even the yet-existing alternatives to capitalism,<sup>3</sup> but rather in opening a space for the observation of alternatives to capitalism.

The recollection of the fact that societies have not always been economized is actually a first step in this direction. An increased awareness of the fact that current societies are considered not only secularized and economized, but also as mediatized (Blumler & Kavanagh, 1999; Castells, 1996; Chomsky, 1997; Croteau & Hoynes, 2003; Dennis, 1978; Eaman, 1987; Hjarvard, 2008; Mazzoleni, 2008; Mazzoleni & Schulz, 1999; Schulz, 2004), politicized (Blumler & Kavanagh, 1999; Chomsky, 2000), intellectualized (Alexander, 1985), or even aesthetized (Blumler & Kavanagh, 1999) may be a reasonable second step. In any case, we find that our degree of liberty of imagination immediately increases as soon as we consider the economy as just one function system among others. Still, we can go on considering the economy to be the most relevant function system of society. In the light of at least nine alternatives, however, this bias to the economy appears as what it is now: A decision, which could have been made differently. If we actually want to make a different decision, then our options are almost unlimited now.

Just to try to start exploring, we could consider function systems as tokens of different colours that can be moved on a board. Even if we wanted to keep the economy at the centre of the board, then the question that emerges now is which of the tokens is second most important and, correspondingly, second closest to centre. Which is third, now?

The more tokens we add to the board, the more we realize that the ranking of tokens we are about to produce is contingent, which means that we are able to deliberately move the tokens according to course of our consideration or discussion. At a certain point, we will realize that we can even remove certain tokens from the board, which includes the token of the economy. If we still have reasonable problems with imagining a society without an economy, then we can refocus our attention from the actually impossible description of such a without-society to the question of what the absence of the economy would do to the remaining function systems and their interrelation. After having experimented with this economy-free scenario, we will find it easier to—just for the sake of form—put another token into the middle of the board, and find the place that the economy would belong to within a society in which art, science or sport is in the centre of attention (cf. the examples in Table 2).

Table 2 gives examples of rankings of function systems within capitalist or non-capitalist societies. These rankings are hypothetical and have an only illustrative function. Nonetheless, at a glance, we find that the dry tables already give a quite well-animated picture of quite different forms of society. In fact, column ‘Non-Capitalism 1’ might remind us of the Occidental Medieval or contemporary societies that are considered theocracies. Sport has not been mentioned in this context because sport is said to have not played a major role between the years 393 and 1894, which also reminds us of the fact that function systems can vanish and re-emerge. The column ‘Capitalism 1’ refers to definitions of capitalism

**Table 2.** Examples of Two Capitalist and Two Non-Capitalist Societies

Rank	Capitalism 1	Capitalism 2	Non-Capitalism 1	Non-Capitalism 2
1	Economy	Policy	Religion	Mass Media
2	Law	Economy	Law	Art
3	Education	Mass Media	Policy	Health
4	Mass Media	Art	Education	Science
5	Health	Health	Science	Religion
6	Art	Sport	Health	Sport
7	Policy	Science	Economy	Education
8	Sport	Education	Art	Economy
9	Science	Law	Mass Media	Law
10	Religion	Religion	–	Policy

**Source:** Author.

in terms of a general bias to a politically unregulated economy, whereas ‘Capitalism 2’ refers to the assumption that capitalism is a form of political pro-market economy ideology spread by politically controlled mass media. ‘Non-Capitalism 2’ finally refers to a potential post-capitalist future scenario, which is in line with discussions on the rather recent trend of the mediatization of a networked innovation society, which, against the background of the recent demographic transitions, also features a stronger focus on the health system. In all cases, the lower ranks have been almost randomly attributed, which is in line with our presumption that too strong a focus on the index patient system(s) leads to a neglect of the remaining function systems and their (relative) relevance for society. In refocusing the entire constellation rather than the performance of individual function systems, we finally find that the observation of the 10 function systems allows for  $10! = 3,628,800$  ways of how to rank them.

We will hence find it easier to support the claim that it is actually both capitalist and anti-capitalist visions of a capitalist society that are in need of justification. And even if we are buying the truism of the economy-biased society, then we find that there are still 362,880 different forms of capitalism left to explore, which unfolds a large background for both systematic and diligent analyses of the most different present and future varieties of capitalism.

## **Outlook to a Post-/Capitalist Multiverse**

The major difference between our present and earlier attempts to provide strategies of overcoming capitalism is that we do not consider the take-off of the economy and its corresponding boundlessness, disembeddedness or eigen-logic as a problem, but rather as a part of the solution. We therefore did not focus problems such as the fact and fiction that

capitalism is doubtless the sole—or at least the main—historical form organizing collective practices to be completely detached from the moral sphere, in the sense that it identifies its purpose in itself (capital accumulation as an end in itself) and not by reference, not simply to a common good, but even to the interests of a collective entity such as a people, a state, or a social class. (Boltanski & Ciapello, 2007: 20)

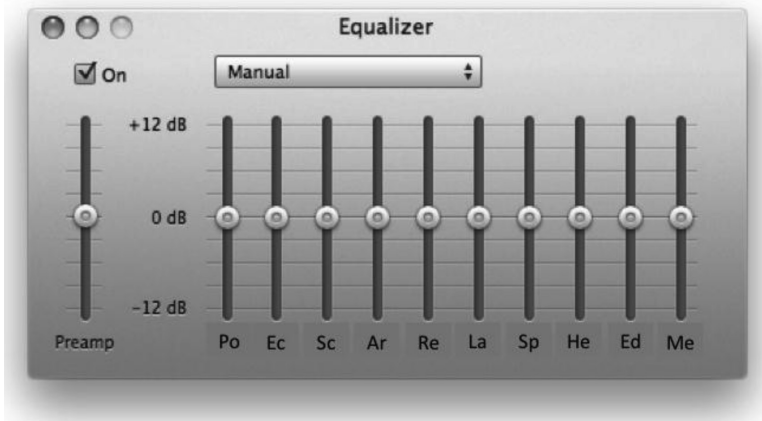
Rather, we emphasize that this form of detachment from segment- or class-specific moralities is one if not the key feature of the transition

from stratified to functionally differentiated societies and therefore constitutive for all function systems.<sup>4</sup> In this sense, our criticism of capitalism also does not refer to any form of group-egoistic moral or vision of a common good. In fact, our criticism of capitalism does not even represent a criticism of capitalism, but rather an observation of the fact that anti-capitalist attempts to overcome capitalism are bound by the inherent paradox that even the sharpest problem focus on capitalism cannot help but sharpening the very problem they are trying to solve. Hence, we could show that the currently perceived alternativelessness of capitalism is due to too strong a focus on capitalism. In order to open a space for the observation of both alternatives to capitalism and alternative forms of capitalism, we therefore based our own observation on form theory and asked for the distinctions we need to draw in order to be at all able to observe capitalism. In doing so, we showed that the observation of capitalism can be unfolded only in the medium of functional differentiation and, consequently, have resituated the economy within a constellation of in total 10 function systems. In focussing the economy within this constellation, we realized that a focus on the economy implies a neglect of the remaining function systems. In this sense, we redefined capitalism as an (maybe politically motivated) observational bias to the economy at the cost of a lack of observation of science, art, religion, law, health, education, sport and the mass media system. Thus, we could point to the fact that the observation of 10 function systems involves 3,628,800 options of how to rank them in terms of their relevance for given societies and, consequently, we found it easy to give illustrative examples of constellations that represent both capitalist and non-capitalist societies. The fact that there are far more than three million possible constellations of function system relevancies, among which only 362,880 would represent examples of societies primarily focussed on the economy, finally allows for the question as to whether popular (self-) definitions of contemporary societies as capitalist societies are truisms rather than truths. In this sense, the present approach to alternative capitalisms and alternatives to capitalism opens a broad field of research in terms of the systematic analysis of function system preferences featured by particular social systems. This also needs to involve the testing of popular trend statements, such as the economization, secularization, politicization or mediatization of society (Roth, 2014b). If this challenge is faced and it turns out that the economy is actually the dominant function system in a considerable number of social systems, then research could still focus on the analysis of the relevance of the remaining function systems and the impact changes in

their constellation have on the dominant economy. Moreover, even if contemporary societies turn out to be capitalist, observers who are sceptical about capitalism can venture onto this new perspective in order to gain higher degrees of liberty in terms of the observation of alternatives to the status quo. In fact, our perspective has proved that it helps to break the automatic and fruitless oscillation between capitalist and anti-capitalist observations of capitalism, and draws attention to both possible alternative forms of capitalism and alternatives to capitalism, the both of which can be attained by a rather smooth shift of our habits of the mind.

The maybe most surprising case, however, would be if research found that our societies are not economized (Roth, 2013; 2014b), but rather mediatized or politicized, the latter of which would call for a quite fundamental strategic change in the ranks of the currently highly politicized anti-capitalist protest movements. In fact, we could wonder what such a political protest against a self-co-produced politicization would look like.

If we found that the economy actually plays only a minor role in contemporary societies, then we would need to realize that a considerable number of highly intelligent persons are spending their time on criticizing from an artefact maintained by their own critique. This again would corroborate the claim that the economy is by far not the only function system focussed on self-identified purposes and, in the words of Boltanski and Chiapello (2007: 20), is therefore detached from their moral sphere. The alternative to a re-moralization of society clearly is in accepting that, even in times 'when capitalism confronts the geochemical limits of the earth' (Cooper, 2007: 28), the economy as well as the other function systems are anchored at a level of higher amorality (Luhmann, 1992). If we observe capitalism not in the medium of the moral, but rather in the medium of functional differentiation, then we find that the problem is not in the amorality of the economy, but rather in the fact that certain observers are more interested in this particular not particularly amoral function system than in other amoral function systems. In other words, again, it is the observation of the economy bias that maintains or even makes the economy bias, which is why anti-capitalists are as much servants of capitalism as capitalists are. This insight can be negated at the cost of an on-going affirmation of capitalism; or it can be taken in as a perfect in form paradoxical observation that allows for the exploration of alternatives of and to capitalism. In concrete terms, we can already grasp a first vision of something that, for the sake of our own anti-capitalist habits of hearts, could be referred to as an 'equalizer'



**Figure 1.** The function system equalizer

**Source:** Modified version of a screenshot of the OS X Mountain Lion equalizer gadget designed by Apple Inc.

whose function can be either in bringing all function systems into baseline or in testing out different sounds (see Figure 1).

Such a function system equalizer may also serve as a tool for the visualization and reflection of function systems preferences, thus also allowing for a reflexive and gamy attitude to the opportunities and challenges of a multifunctional life design. In fact, the idea of a function system equalizer may help to explore and experiment with modulating the frequencies of individual or collective forms of attention to certain function systems. At the individual level, one important outcome of these experiments may be that we reconsider our only two-dimensional fascination for minutest adjustments of the economic and political slide controls, which is currently being re-popularized by claims for a repoliticization of growth (Fournier, 2008), in the context of which growth is commonly being equated with economic growth (Latouche, 2009; Romano, 2012; Urry, 2010). The question of ‘Degrowth or regrowth’ (Whitehead, 2013), however, is maybe not only about more or less of the economy, but rather about more or less of growth within the entire constellation of function systems. Calls for a fair degrowth society (Muraca, 2012), for example, are also drawing our attention to the legal slide control, and the question remains why other frequencies should remain out of focus. What would be wrong with aesthetic growth? Why not dare more religion? Can we imagine a society centred on sport?



Do we want to live in a health society? A major challenge that may arise if an increasing number of members of our society start experimenting with the idea of a function systems equalizer is that many individuals, movements or organizations may soon have a very clear perception of their preferred function systems constellation, which might however, not be compatible with those of others. Nevertheless, this issue is maybe just a political issue, and all involved may well decide to set it aside to rather focus more on emerging aesthetic, religious or scientific issues.

If we combine observations of different function systems or of different trend statements, respectively, within one systematic approach to functional differentiation, this already allows for questions as to whether the frequency shares of our attention to function systems resembles a zero sum game or can be collectively increased. In looking at the drop down menu in the figure, we can also wonder whether societies have certain standard programmes that automatically realize a particular function system ranking, for example a dominance of the political system and the economy in times of war as opposed to a higher interest in art and religion in times of increased migration. In the context of our research interest, it would be interesting to find out whether the observation of capitalism is due to the operating of such a programme in that we can easily imagine that such programmes tend to operate even if the initial trigger situation has changed.

The solution to the problem of overcoming capitalism is simple: We just need to dim our passion for the economy and turn up our interest in some of the so far neglected function systems of society. Just as it is the case with many simple solutions, however, their implementation is the crux. First of all, anti-capitalists who are truly interested in overcoming the sworn enemy would have to change their speaking and listening habits. Fortunately, this change of habits would have not to be too profound, just because the fact that the function systems are essentially incommensurable will still spark numerous forms of those moral discourses we are so well trained to hold. This time, however, these discourses will be held in the light of real alternatives even to something as supposedly momentous as capitalism. This strategy can be particularly well tested right now in the context of the recently reignited trench warfare between politics and the economy. In doing so, we will maybe find quite soon that the solution to the financial crises is in drawing away the attention from the apparently strong stimuli and rather putting the spotlight on so far rather underexposed function systems of the society. Indeed, we could start wondering why the key to solving the economic

crises should be, of all, again a political one, and not an aesthetic, sportive or, perish the thought, a scientific one, this time?

### **Acknowledgments**

I owe much to André Reichel, Karlshochschule International University, for organizing the PDW on ‘Degrowth, Capitalism and the Role of Business’ at the 2013 Academy of Management Annual Meeting, thus designing a context that helped a great deal to improve this article. The same is true for Risto Heiskala, University of Tampere, Gorm Harste and Jesper Tække, Aarhus University, and their workshop ‘Social theory, Society and Differentiation’ at the 27th Conference of the Nordic Sociological Association. Matthias Georg Will, University of Halle-Wittenberg, also provided inspiring comments on an earlier version of this text, for which I am grateful as much as I am to the anonymous reviewers who offered very insightful and challenging comments.

### **Notes**

1. From a form-theoretical point of view, the fact that these two distinctions are ‘called’ and not ‘crossed’ (Kauffman, 1987a; Spencer Brown, 1979) can be criticized because, according to Luhmann (1977: 31), we need to ‘conceive of system differentiation as the reduplication of the difference between system and environment within system’. Yet, in the further course of his argument Luhmann (1977: 33) also cross-tables two distinctions, namely system/environment and equality/inequality. For the sake of connectivity to the social science classics, this text opts for the calling of two more familiar distinctions.
2. The concept of functional differentiation suggests that function systems are to be considered incommensurable and, thus, of equal ‘value’ for society. Still, this basic equivalence of the function systems is a prerequisite for rather than a result of research in biases to certain function systems. From a theoretical point of view, there is indeed no reason for taking one function system for more important than another. However, in observing concrete subsystems of society, it appears that the theoretically incommensurable function systems actually can be ranked according to their relevance, which may be observed not only for organizations as social systems with an imminent need for decision (Roth, 2014c), but also for entire societies (cf. [Roth, 2014b] for a culturomic analysis of trends in functional differentiation). As easy as it is to understand that the economy is likely to be more relevant to a bank than to a hospital, there is consensus on the fact that the relevance of religion declined in the Occident throughout the past centuries. In other words, there are observations of something like a relative value of the individual function systems, which obviously varies between individual subsystems and can change over time. While this idea does not challenge, but rather support, the concept of the basic functional equivalence of the function systems, it

- nonetheless calls for new methods of both research on the preferences certain social systems have for certain function systems and research on how these preferences change over time.
3. In psychologizing a little bit, thus keeping this statement at the level of a mere metaphor, we could speculate that modern societies cultivate a regression-taboo insofar as a return to a religion-centred society currently seems out of question (Bracke, 2008; Martin, 2005, 2011). It would be interesting to find out whether such a taboo actually exists and whether its maintenance affects the concerned societies' capability of unlocking further alternatives to capitalism.
  4. Just to mention the not exactly small number of twentieth-century political movements that have strikingly demonstrated that power for power's sake, that is, very eigen-logic forms of social capital accumulation, can also constitute ends in themselves.
  5. 'Pope Francis manifesto for papacy', *Reuters*, <http://www.reuters.com/article/2013/11/26/us-pope-document-idUSBRE9AP0EQ20131126>

## References

- Alexander, J.C. (1985). *Neofunctionalism*. Beverley Hills: SAGE Publications.
- Andersen, N.Å. (2003). Polyphonic organizations. In T. Hernes & T. Bakken (Eds), *Autopoietic organization theory* (pp. 151–182). Copenhagen: CBS.
- Baecker, D. (1994). Soziale Hilfe als Funktionssystem der Gesellschaft. *Zeitschrift für Soziologie*, 23(2), 93–110.
- Bay, T. (2012). Chrematistic deviations. *Journal of Interdisciplinary Economics*, 24(1), 29–54.
- Beck, U., Bonss, W., & Lau, C. (2003). The theory of reflexive modernization. *Theory, Culture & Society*, 20(2), 1–33.
- Berghaller, H., & Schinko, C. (2011). Introduction: From national cultures to the semantics of modern society. In H. Berghaller & C. Schinko (Eds), *Addressing modernity. social systems theory and U.S. cultures* (pp. 5–34). Amsterdam and New York: Edition Rodopi.
- Blumler, J.G., & Kavanagh, D. (1999). The third age of political communication: Influences and features. *Political Communication*, 16(3), 209–230.
- Boltanski, L., & Chiapello, E. (2005). The new spirit of capitalism. *International Journal of Politics, Culture, and Society*, 18(3), 161–188.
- . (2007). *The new spirit of capitalism*. London: Verso.
- Bousquet, M. (2002). Cultural capitalism and the 'James Formation'. In S. Griffin (Ed.), *Henry James goes to the movies* (pp. 210–239). Lexington: University of Kentucky Press.
- Bracke, S. (2008). Conjugating the modern/religious, conceptualizing female religious agency. *Theory, Culture & Society*, 25(6), 51–67.
- Çalışkan, K. & Callon, M. (2009). Economization, part 1: Shifting attention from the economy towards processes of economization. *Economy and Society*, 38(3), 369–398.

- Callon, M. (1998). Introduction: The embeddedness of economic markets in economics. In M. Callon (Ed.), *The laws of the markets* (pp. 1–57). Oxford: Blackwell.
- Castells, M. (1996). *Rise of the network society*. Cambridge: Blackwell Publishers.
- Cattacin, S. (2001). Réciprocité et échange. *Revue internationale de l'économie sociale*, 80(279), 71–82.
- Chomsky, N. (1997). *Media control. The spectacular achievements of propaganda*. New York: Seven Stories Press.
- . (2000). *Rogue states: The rule of force in world affairs*. Cambridge: South End Press.
- Cooper, M. (2007). Life, autopoiesis, debt. *Distinktion: Scandinavian Journal of Social Theory*, 8(1), 25–43.
- Croteau, D., & Hoynes, W. (2003). *Media society: Industries, images and audiences*. Thousand Oaks: SAGE Publications.
- Dennis, E.E. (1978). *The media society: Evidence about mass communication in America*. Dubuque: W.C. Brown.
- Durkheim, E. (1933). The division of labor. *Trans. G. Simpson*. New York: Macmillan.
- Eaman, R.A. (1987). *The media society: Basic issues and controversies*. London: Butterworths.
- Elias, N. (1978). *What Is Sociology?* (S. Mennell & G. Morrissey, Trans.). London: Hutchinson.
- Falloon, I.R., & Pederson, J. (1985). Family management in the prevention of morbidity of schizophrenia: The adjustment of the family unit. *The British Journal of Psychiatry*, 147(2), 156–163.
- Fournier, V. (2008). Escaping from the economy: The politics of degrowth. *International Journal of Sociology and Social Policy*, 28(11/12), 528–545.
- Giddens, A. (1973). *Capitalism and modern social theory: An analysis of the writings of Marx, Durkheim and Max Weber*. Cambridge: Cambridge University Press.
- Harrebye, S. (2013). The ambivalence of creative activism as a reorganization of critique. *Culture and Organization*, 21(2), 1–21.
- Hjarvard, S. (2008). The mediatization of society. A theory of the media as agents of social and cultural change. *Nordicom review*, 29(2), 105–134.
- Holton, R.J. (2013). *Economy and Society*. London: Routledge.
- Jackson, P.Z. & McKergow, M. (2002). *The solutions focus: The simple way to positive change*. London: Nicholas Brealey Publishing.
- Kauffman, L.H. (1987a). *Imaginary values in mathematical logic*. Paper presented at the Proceedings of the Seventeenth International Conference on Multiple Valued Logic.
- . (1987b). Self-reference and recursive forms. *Journal of Social and Biological Structures*, 10(1), 53–72.
- Kjaer, P.F. (2010). The metamorphosis of the functional synthesis: A continental european perspective on governance, law, and the political in the transnational space. *Wisconsin Law Review*, 2010(2), 489–533.

- Klein, N. (1999). *No logo: Taking aim at the brand bullies*. New York: Picador.
- . (2002). Introduction. In M. Prokosch & L. Raymond (Eds), *The global activist's manual* (pp. 1–8). Hempstead: Visabooks.
- Künzler, J. (1987). Grundlagenprobleme der Theorie symbolisch generalisierter Kommunikationsmedien bei Niklas Luhmann. *Zeitschrift für Soziologie*, 16(5), 317–33.
- . (1989). *Medien und Gesellschaft. Die Medienkonzepte von Talcott Parsons, Jürgen Habermas und Niklas Luhmann*. Stuttgart: Enke.
- Larsen, L.T. (2011). Turning critique inside out: Foucault, Boltanski and Chiapello on the tactical displacement of critique and power. *Distinktion: Scandinavian Journal of Social Theory*, 12(1), 37–55.
- Latouche, S. (2009). *Farewell to growth*. Cambridge: Polity Press.
- Luhmann, N. (1977). Differentiation of society. *The Canadian Journal of Sociology/Cahiers canadiens de sociologie*, 2(1), 29–53.
- . (1990). The paradox of system differentiation and the evolution of society. In J.C. Alexander and P. Colomy (Eds), *Differentiation theory and social change: Comparative and historical perspectives* (pp. 409–440). New York: Columbia University.
- . (1992). The code of the moral. *Cardozo Law Review*, 14(1), 995–1009.
- . (1995). *Social systems*. Stanford: Stanford University Press.
- Luhmann, N., & Barrett, R. (2012). *Theory of society, Volume 1*. Palo Alto: Stanford University Press.
- Luhmann, N., Holmes, S., & Larmore, C. (1982). *The differentiation of society*. New York: Columbia University Press.
- Martens, W. (2006). The distinctions within organizations: Luhmann from a cultural perspective. *Organization*, 13(1), 83–108.
- Martin, D. (2005). *On secularization: Towards a revised general theory*. Aldershot: Ashgate.
- . (2011). *The future of christianity: Reflections on violence and democracy, religion and secularization*. Aldershot: Ashgate Publishing Company.
- Marx, K. (1867). *Capital, critique of political economy, Volume I*. Harmondsworth: Penguin.
- Mazzoleni, G. (2008). Mediatization of society. In W. Donsbach (ed.), *The International Encyclopedia of Communication* (3052–3055). Malden: Blackwell Publishing.
- Mazzoleni, G., & Schulz, W. (1999). ‘Mediatization’ of politics: A challenge for democracy? *Political Communication*, 16(3), 247–261.
- Muraca, B. (2012). Towards a fair degrowth-society: Justice and the right to a ‘good life’ beyond growth. *Futures*, 44(6), 535–545.
- Ossewaarde, M. (2012). The crowd in the occupy movement. *Distinktion: Scandinavian Journal of Social Theory*, 14(2), 134–150.
- Parsons, T., & Smelser, N. (1998). *Economy and society: A study in the integration of economic and social theory*. London: Routledge.
- Reese-Schäfer, W. (1999). *Luhmann zur Einführung*. Hamburg: Junius.

- Reichel, A. (2011). Snakes all the way down: Varela's calculus for self-reference and the praxis of paradise. *Systems Research and Behavioral Science*, 28(6), 646–662.
- Robin, C. (02 February 2004). Endgame. Conservatives after the cold war. *Boston Review*, 2004, 26–30.
- Romano, O. (2012). How to rebuild democracy, re-thinking degrowth. *Futures*, 44(6), 582–589.
- Ropers, N. (2008). Systemic conflict transformation: Reflections on the conflict and peace process in Sri Lanka. *A systemic approach to conflict transformation: Exploring strengths and weaknesses*. Berlin: Berghof Handbook Dialogue Series, 11–41.
- Roth, S. (2013). The unpopular function. Testing the economization of society hypothesis against a Google Ngram view of trends in functional differentiation (1800–2000). *Proceedings of the 7th International Days of Statistics and Economics, Prague*, 1200–1210.
- . (2014a). Booties, bounties, business models. A Map to the next red oceans. *International Journal of Entrepreneurship and Small Business*, 22(4), 439–448.
- . (2014b). Fashionable functions. A Google ngram view of trends in functional differentiation (1800–2000). *International Journal of Technology and Human Interaction*, 10(3), 88–102.
- . (2014c). The multifunctional organization: Two cases for a critical update for research programs in management and organization. *Tamara Journal for Critical Organization Inquiry*, 12(3), 37–54.
- . (2014d). Ten systems: Toward a canon of function systems. *Cognitive Social Science eJournal*, 6(134), Available at SSRN 2508950.
- Schiltz, M. (2007). Space is the place: the laws of form and social systems. *Thesis Eleven*, 88(1), 8–30.
- Schulz, W. (2004). Reconstructing mediatization as an analytical concept. *European Journal Of Communication*, 19(1), 87–101.
- Sparrer, I. (2007). *Miracle, solution and system: Solution focused systemic structural constellations for therapy and organisational change*. Cheltenham: Solutions Books.
- Spencer Brown, G. (1979). *Laws of form*. New York: E.P. Dutton.
- Spencer, H. (1895). *The principles of sociology, Volume 1*. New York: Appleton.
- Stehr, N. (2002). *Knowledge and economic conduct: The social foundations of the modern economy*. Toronto: University of Toronto Press.
- Suvarierol, E. (2006). Solution-focused work and systemic structural constellations (syst) for lasting solutions in complex projects. *Solution-Focused Management*, 1, 363.
- Swedberg, R. (1990). *Economics and sociology: Redefining their boundaries: conversations with economists and sociologists*. Princeton: Princeton University Press.
- Tönnies, F. (1887). Community and society. *The Urban Sociology Reader*, 13–22.

- Tormey, S. (2012). Anti-capitalism. In G. Ritzer (ed.), *The Wiley-Blackwell Encyclopedia of Globalization* (pp. 69–71). Oxford: Wiley-Blackwell.
- Urry, J. (2010). Consuming the planet to excess. *Theory, Culture & Society*, 27(2–3), 191–212.
- Wennerhag, M. (2010). Another modernity is possible? The global justice movement and the transformations of politics. *Distinktion: Scandinavian Journal of Social Theory*, 11(2), 25–49.
- Whitehead, M. (2013). Degrowth or regrowth? *Environmental Values*, 22(2), 141–145.
- Whittington, J. (2012). *Systemic coaching and constellations: An introduction to the principles, practices and applications*. Kogan Page.

## **Selected Publications of Steffen Roth**

### Journal articles

1. Roth, S. (2015), Free economy! On 3628800 alternatives of and to capitalism, *Journal of Interdisciplinary Economics*, Vol 27 No. 2, forthcoming.
2. Roth, S. (2015), Serious gamification. On the redesign of a popular paradox, *Games and Culture*, online first April 2015.
3. Roth, S., Schneckenberg, D. and Tsai, C.-W. (2015), The ludic drive as innovation driver: Introduction to the gamification of innovation, *Creativity and Innovation Management*, Vol. 24 No. 2, pp. 300-306.
4. Roth, S. (2014), The multifunctional organization: Two cases for a critical update for research programs in management and organization, *Tamara: Journal for Critical Organization Inquiry*, Vol. 12 No. 3, pp. 37-54.
5. Roth, S. (2014), Fashionable functions. A Google ngram view of trends in functional differentiation (1800-2000), *International Journal of Technology and Human Interaction*, Vol. 10 No. 2, 34-58.
6. Roth, S. (2014), Booties, bounties, business models. A map to the next red oceans, *International Journal of Entrepreneurship and Small Business*, Vol. 22 No. 4, 439-448.
7. Roth, S. (2014), The eye-patch of the beholder. Introduction to entrepreneurship and piracy, *International Journal of Entrepreneurship and Small Business*, Vol. 22 No. 4, 399-407.
8. Roth, S. (2014), The things that go without saying. On performative differences between business value communication and communication on business values, *International Journal of Business Performance Management*, Vol. 15 No. 3, 175-191.
9. Roth, S. (2014), Coining societies. An inter-functional comparative analysis of the Euro, *Innovation: The European Journal of Social Sciences*, Vol. 27 No. 4, 99-118.
10. Roth, S. (2013), Common values? Fifty-two cases of value semantics copying on corporate websites, *Human Systems Management*, Vol. 32 No. 4, pp. 249-265.
11. Roth, S., Kaivo-oja, J. and Hirschmann, T. (2013), Smart regions. Two cases of crowdsourcing for regional development, *International Journal of Entrepreneurship and Small Business*, Vol. 20 No. 3, pp. 272-285.
12. Roth, S. (2013), Dying is only human. The case death makes for the immortality of the person, *Tamara: Journal for Critical Organization Inquiry*, Vol. 11 No. 2, pp. 37-41.
13. Roth, S. (2012), Leaving commonplaces on the commonplace. Cornerstones of a polyphonic market theory, *Tamara: Journal for Critical Organization Inquiry*, Vol. 10 No. 3, pp. 43-52.
14. Roth, S. (2012), The moral of functional differentiation. A new horizon for descriptive innovation ethics, *Electronic Journal of Business Ethics and Organization Studies*, Vol. 17 No. 2, pp. 27-34.



15. Jaccard, D. and Roth, S. (2012), Formation à la gestion de projet et simulations, *Revue Economique et Sociale*, Vol. 70 No. 2, pp. 79-88.
16. Roth, S. (2011), Les deux angleterres et le continent. Anglophone sociology as the guardian of Old European semantics, *Journal of Sociocybernetics*, Vol. 9 No. 1-2, pp. 19-34.
17. Roth, S. (2011), Erinnerungsdesign in Armenien. Ein Staat an seinen Grenzen, *Revue für Postheroisches Management*, Heft 8 (Design Thinking), pp. 106-111.
18. Roth, S. (2010), The Diaspora as a nation's capital: Crowdsourcing strategies for the Caucasus, *International Journal of Transition and Innovation Systems*, Vol. 1 No. 1, pp. 44-58.
19. Roth, S. (2009), New for whom? Initial images from the social dimension of innovation, *International Journal of Innovation and Sustainable Development*, Vol. 4 No. 4, pp. 231-252 [VHB].
20. Roth, S., and Aderhold, J. (2008), World society on the couch: anti-terror consultancy as an object and test-bed of professional sociology, *HUMSEC Journal*, Vol. 2, No. 1, pp. 67-83.

#### Edited Volumes and Issues

21. Roth, S. (2017), Management and function: From added values to augmented realities, *Systems Research and Behavioral Sciences*, publication scheduled March-April 2017.
22. Roth, S. (2015), The gamification of innovation, *Special Section of Creativity and Innovation Management*, forthcoming [FNEGE, CNRS, JCR].
23. Roth, S. (2014), Entrepreneurship and piracy, *Special Issue of the International Journal of Entrepreneurship and Small Business*, Vol. 22 No. 4 [FNEGE, CNRS].
24. Roth, S. (2012), The multimedia organization, *Special Issue of Tamara: Journal for Critical Organization Inquiry*, Vol. 10 No. 3 [ABS].
25. Scheiber, L., Roth, S. and Reichel, A. (2011), The technology of innovation, *Special Issue of the International Journal of Innovation and Sustainable Development*, Vol. 5 No. 2-3, 101-104.
26. Roth, S., Wetzel, R. and Müller, K. (2011), Non-technological and non-economic dimensions of innovation systems, *Special Issue of the International Journal of Innovation and Regional Development*, Vol. 3, No. 1.
27. Müller, K., Roth, S. and Žák, M. (2010), *The social dimension of innovation*, Prague, Linde.
28. Roth, S., Scheiber, L. and Wetzel, R. (2010), *Organisation multimedial. Zum polyphonen Programm der nächsten Organisation*, Heidelberg, Carl Auer.
29. Roth, S. (2009) *Non-technological and non-economic innovations: Contributions to a theory of robust innovation*, Bern, Peter Lang.

## Books

30. Roth, S. (2013) The multimedia organization. Functional differentiations on organizational identity. Geneva, University of Geneva.
31. Roth, S. (2010) Markt ist nicht gleich Wirtschaft. These zur Begründung einer allgemeinen Marktsoziologie. Heidelberg, Carl Auer Verlag.

## Book Chapters

32. Roth, S., Mkrtchyan, A. and Vartikyan, A. (2011), Armenia, in Barnett, G. and Golson, J. G. (eds), Encyclopedia of social networks, Thousand Oaks, SAGE Publishing, pp. 56-57.
33. Roth, S. (2010), Zu den Grenzen des Gemeinplatzes vom wirtschaftlichen Markt: Ecksteine einer allgemeinen Marktsoziologie, in Pahl, H. und Meyer, L. (Hrsg), Gesellschaftstheorie der Geldwirtschaft, Marburg, Metropolis.
34. Roth, S. (2009), Introduction. Towards a theory of robust innovation. In Roth, S. (ed.) Non-technological and Non-Economic Innovations: Contributions to a Theory of Robust Innovation, Bern, Peter Lang.
35. Roth, S. (2009), Каковы перспективы краудсорсинга? Транснациональные стратегии открытых инноваций для предотвращения “утечки умов” из стран СНГ Перевод с английского, Пипия, Л. К. (сост.), Общественные и гуманитарные науки: тенденции развития и перспективы сотрудничества, М., Ин-т проблем развития науки РАН.

## Working Papers

36. Roth, S. (2014), A Forest for the Trees. The Tetralemmatic Re-/Form of the Paradox in Management and Organization, Change Management and Organizational Behavior eJournal, Vol. 5 No. 34. Download.
37. Roth, S. (2014), Ten systems: Toward a canon of function systems, Cognitive Social Science eJournal, Vol. 6 No. 134. Download.
38. Roth, S. (2014), The form ‘serious game’. On the resolution of a popular paradox, Cognition and the Arts eJournal, Vol. 6 No. 23. Download.
39. Roth, S. (2012), Die zehn Systeme. Ein Beitrag zur Kanonisierung der Funktionssysteme, Social and Political Philosophy eJournal, Vol 6 No. 12. Download.