

Cornelius Schubert

**Social Innovations. Highly reflexive and multi-referential
phenomena of today's innovation society?**

A report on analytical concepts and a social science initiative

Technical University Technology Studies
Working Papers

TUTS-WP-2-2014

Social Innovations. Highly reflexive and multi-referential phenomena of today's innovation society?

A report on analytical concepts and a social science initiative

Dr. Cornelius Schubert
DFG-Graduiertenkolleg Locating Media
Universität Siegen
Artur Woll-Haus
Am Eichenhang 50
57076 Siegen

cornelius.schubert@uni-siegen.de

Abstract

This report provides an overview on the growing topic of social innovations. It summarises the main arguments and traces their discussion in the social sciences. In a first step, the paper focuses on the conceptual distinctions between social and technical innovations on the one hand, and between social innovation and social change on the other. From this point of departure, the second and central part of the paper addresses questions concerning the reflexive nature of social innovations as well as the referential structures used for evaluating social innovations in contemporary 'innovation societies'. Based on this framework, the third and last part of the paper provides a brief overview of current social innovation initiatives and institutions at the EU level. The aim is to situate the concept of social innovations in a broader discussion of social and technical change, reflexive modernisation and emerging innovation societies today.

Keywords

Social innovation, innovation society, practice theory, reflexive modernisation, pragmatism, valuation.

Content:

1. Introduction	1
2. Distinguishing social innovation from technical innovation	2
3. Distinguishing social innovation from social change	5
4. Reflexivities of social innovations	8
5. Multiple references of social innovations	14
6. Social innovation initiatives and institutions in the EU	20
7. Conclusion.....	28

Social Innovations. Highly reflexive and multi-referential phenomena of today's innovation society?*

A report on analytical concepts and a social science initiative

1. Introduction

Social innovations have become a popular topic in many societal areas, political fields and academic discourses (cf. Taylor 1970, Whyte 1982, Zapf 1989, Gillwald 2000, Mumford 2002, Mulgan 2006, Phills Jr. et al. 2008, Howaldt/Jacobsen 2010, Nicholls/Murdock 2012). Despite this prosperity, many aspects of social innovations remain unclear (Howaldt/Schwarz 2010). This report will engage with the concept of 'social innovation' along three specific lines of inquiry (two conceptual and one empirical) in order to situate social innovations against the backdrop of emerging 'innovation societies' (Hutter et al. 2011). The first line of discussion defines the term 'social innovation' in contrast to concepts of technical innovation and social change (sections 2 and 3). The second line bears on theoretical considerations of increasingly reflexive and multi-referential social innovations in modern societies (sections 4 and 5). Last not least, the third line of discussion revolves around the growing interest in social innovations at the level of EU policy and funding, which is taken as an empirical example of the increasingly reflexive and multi-referential nature of social innovations (section 6).

The first part of the report starts with a critique of the prevalent distinction between technical and social innovations (section 2). Generally, social innovations are thought to be less tangible than the artefacts of technical innovation: social innovations target the level of social practices, seeking to change established ways of conduct. This simple distinction between immaterial social innovations and tangible technical innovations will be challenged in the course of the paper. However, social innovations will remain the primary focal point. In addition to the social/technical divide, there are distinctly normative aspects of the term 'social innovation'. Social innovations are often characterised as having a positive value, of being 'good' or at least 'better', than what they replace. For some, they are also seen as fulfilling a specific function in modern societies: social innovations occur as bottom-up developments in contexts where bureaucratic planning or market processes fail. In this sense, social innovations are not only 'good', their origin is distinctly assigned to the civic sphere – in stark contrast to many technical innovations created in the political or economic realm. However, social innovations do resemble technical innovations in the sense that they are mindful and directed transformations, which sets them apart from larger and unplanned social change (section 3). Social innovations, it is argued, still are innovations and thus carry specific analytical meanings and normative connotations which are often conflated, but need to be distangled in order to understand the dynamics of an innovation society.

* This report was prepared for the Research Training Group *Innovation Society Today. The Reflexive Creation of Novelty*, funded by the German Research Council (DFG), <http://www.innovation.tu-berlin.de>. In this context, the paper draws from some literature that is currently only available in the German language. I am indebted to Sarah Matthews for providing skilful language counselling and to Michael Hutter and Werner Rammert for their critical input.

This discussion about the characteristics of social innovations is extended in the second and central part of the paper by an inquiry into what it means when social innovations are increasingly produced in a reflexive manner (section 4). The rise of programmes and initiatives that revolve around social innovation indicates that they may have become a widely recognised instrument of political or civic engagement. As innovation becomes a ubiquitous part of modern life, it also becomes an enduring aspect of social practices, which are then judged by whether they comply with society's seemingly insatiable desire for novelty (Nowotny 2005). The problematic aspects of valuating and judging social innovations will then be discussed in terms of their multiple references (section 5). This discussion aims at providing a brief analytical perspective on the relationship between social innovations and distinctly modern forms of societal integration. Cross-identifying modernity with innovation poses some theoretical challenges, mainly the problem of explaining modernity in terms of innovation and vice versa, but these challenges will not be addressed here. Instead, the idea of a reflexive innovation society points to an emerging imperative of novelty, creativity and innovation within modern societies (Rammert 2010: 47).

Following the two conceptual parts, the empirical findings in section 6 illuminate how the current activities in harnessing social innovations on an international scale are both a solution and a problem in modern societies. On the one hand, social innovations promise novel solutions to societal problems where traditional state and market instruments have failed. On the other hand, social innovations most often occur in bottom-up, grassroots processes in local contexts and cannot easily be scaled up to regional or national levels. Innovation societies are thus faced with specific difficulties of integrating social innovations in existing governance structures, as the case of the EU will show.

This report on social innovations is intended to provide an overview of the topic and to collect central themes which have been addressed so far. By the same token, it cannot elaborate on all the issues raised in detail – especially sections 4, 5, and 6 should be read as marking relevant conceptual and empirical issues that warrant further discussion.

2. Distinguishing social innovation from technical innovation

Viewing social and technical innovation as distinct entities is a dominant feature in the discussion about the specifics of social innovations. Zapf (1989), for instance, separates social from material innovations, the former pertaining to changes in organisations, regulations and institutions, the latter to novel artefacts and material arrangements. Both types draw on a general understanding of innovations as 'novel material and social technologies which help to fulfil our needs and solve social problems in a better way' (ibid., p. 174, transl. CS). Note that Zapf understands both social and material innovations as *technologies*. This implies that all innovations can be broadly understood as technologies, i.e. innovations imply a more or less *instrumental* (as in active and directed) perspective. I will take up this point later on (cf. section 5); first, however, I will discuss Zapf's distinction between *social innovation as predominantly immaterial* and *technical innovation as predominantly material*.

Out of the many scholars who have studied the relationship between social and technical innovations, Ogburn's (1922; 1964) seminal work on the relation of material and cultural change serves as an important, yet often neglected, reference point (cf. Godin 2010). Zapf points out that Ogburn's theory of 'cultural lag', on the one hand emphasises material change as the dominant agent of social change in modern societies. On the other hand, Ogburn places a high premium on the social innovations which are employed in order to adapt to the rapid material changes in modern societies, e.g. social innovations in the areas of law or education.

Although Ogburn often is misconceived as a strong proponent of classic technical determinism with regard to cultural change, he never in fact succumbed to a reductionist model of technological innovation. Ogburn referred not only to material innovations, but to changes in material culture, i.e. in those parts of society which are predominantly concerned with material reproduction (Ogburn 1922, pp. 268). Even though he emphasised the misalignment between material and adaptive cultures and the pressure to change emanating from the material cultures and moving towards the adaptive cultures, he neither reduced the former to mere technical issues nor the latter to purely social affairs. Both realms of culture are always composed of both social and material entities. What stands at the heart of Ogburn's reasoning is not a distinction between technical and social innovation, but a perspective of social change that explicitly centres on processes of innovation *per se*: While innovations create pressure to adapt, they also are the very modes of adapting to such novel demands. This way, Ogburn can be seen as an early scholar of an emerging innovation society, maybe even the first.

In order to frame the dynamics of innovation as processes of social change, Ogburn stresses the interrelatedness of societal subfields in differentiated societies. Under the conditions of strong interdependence, novelties in one field are more likely to occasion changes in another: 'To the extent that culture is like a machine with parts that fit, cultural lag is widespread.' (Ogburn 1964, p. 91). As we will see later, social innovations are often framed as instruments for reducing cultural lag by serving as an antidote against the adverse effects of techno-economic innovations.

As indicated above, Ogburn did not systematically focus on social innovations and Zapf addresses this deficit by pointing out seven different kinds of social innovations identified in relevant literature (1989, pp. 175):

- 1) Organisational change within a company
- 2) Novel services as opposed to novel products
- 3) Social technologies invented to accompany material innovations
- 4) Self-made social inventions by the involved actors
- 5) Political innovations triggered by large-scale reforms
- 6) Novel patterns of need fulfilment, often sparked by novel technologies
- 7) Novel lifestyles, often as adaptations to material and societal changes

From this list we can already see that social innovations are more often than not socio-technical innovations. Zapf uses this heterogeneous mix of cases not as a clear delineation of social innovations from technical innovations, but rather as a collection to counter a conceptual and empirical narrowing of the term innovation down to 'pure' technical innovations. According to Zapf, 'pure' social innovations would then be, for instance, leasing in the economic realm, summit meetings in the political realm and self-help groups in the institutional realm (Zapf based on Brooks 1982). It remains to be seen in how far the latter actually qualify as innovations in the sense that they were deliberately pursued. Summit meetings, for instance, have a long history and might rather be a case of an emergent evolutionary development. Similarly, self-help is hardly new in itself, rather it has taken on distinct forms of social organisation.

After having separated social from material innovations in this brief and admittedly sketchy manner, Zapf elaborates his understanding of social innovations as ‘novel ways to reach ends, especially novel forms of organising and regulating, as well as novel lifestyles that change the direction of social change, solve problems in a better way than previous practices and are therefore worthy of being imitated and institutionalised’ (Zapf 1989, p. 177, transl. CS). Zapf’s use of the means/ends motive entails an instrumental notion of social innovation which again closely links social innovation to broader concepts of technology. The difference between social and technical innovation, then, is not found in a fundamental difference, but rather in a gradual difference concerning the realms (social/technical) in which innovations *predominantly* emerge (Howaldt/Schwarz 2010, p. 96).

The strong similarities between social and technical innovations mentioned thus far, as well as the manifold efforts to distinguish between the two, can only be read as a general move to reclaim the term ‘innovation’ from a dominant discourse that focuses on technical innovation alone (Rammert 2010). This one-sided view of innovation is still an obvious bias in academic, economic, political as well as civil debates. Historically, the dominant reference to technical innovation is actually somewhat of an oddity. Godin (2008) has traced the use of the term ‘innovation’ back to religious and political debates starting in the late fifteenth century, when innovation was a derogatory term used to indicate an upset in the natural order of things, i.e. the given societal structure. Even without the adjective ‘social’, the term ‘innovation’ by and large implied social innovation and changes in the societal order. In the nineteenth century, the adjective ‘social’ was added to the term innovation in order to denote and devalue – mainly communist – ideas and ideals concerning social change. According to Godin, it was only in the twentieth century that the term innovation took on a positive (mainly through Ogburn) and technical (mainly through Schumpeter) meaning – even though Schumpeter himself was more concerned with the economic than the technical aspects of innovation, e.g. the creation of new markets or the novel combination of existing elements (cf. Rammert 2008).

The historical shift from negative social connotations of the term innovation up to the late 19th century to positive technical connotations during the 20th century, and finally positive social connotations later in the 20th century, is accompanied by a shift in seeing innovators not as subversive heretics, but as creative entrepreneurs, i.e. a shift in the social valuation of innovative agency (Godin 2008, p. 23). It also points to a novel and genuinely modern understanding of innovation as a corrective agent in industrial societies, where technical and social innovations seem to constantly place pressure upon various societal matters, as emphasised by Ogburn. Again, this understanding closely links social and technical innovation and creates a rather optimistic view of the possibilities of social innovation, similar to technical innovations, e.g. in terms such as ‘social engineering’ (Godin 2008, referring to Fairweather). Both technical and social innovations are aspects of a modern and rational approach to social change.

The recent emphasis on social innovation should therefore not be misunderstood as a conceptual abandonment of materiality or technology, but as an empirical call for the analysis of innovation processes which were long neglected due to a dominant focus on technical innovations during the last decades. Sometimes, this still leads to juxtapositions of the ‘social’ and the ‘technical’ and the proposition of distinct differences (Howaldt/Schwarz 2010, p. 97). However, the multitude of socio-technical innovation studies in the field of science and technology studies, based, among other approaches, on actor-network theory (ANT) (Law/Hassard 1999), have successfully challenged both social and technical reductionisms in favour of concepts that allow for the relational and mutual constitution of social and technical entities during innovation processes.

What is distinctive about social and technical innovations, is not a difference in their *inherent mechanisms*, but rather in their *referentiality*, a point to which we will turn in section 5. This leaves us with a notion of innovation which bears an uncanny resemblance to instrumental means-ends relationships found in broad understandings of technology. Yet, scholars in science and technology studies (STS) have repeatedly insisted that no instrument or technology is ever a mere means to an end (Latour 2002, Rammert 2012). Likewise, social innovations are never neutral, but always a transformative force operating according to specific logics and rationalities. Last not least, a strict differentiation between social and technical innovation becomes dubious when seen from theoretical perspectives in social innovation research, mainly practice theory and pragmatism. Howaldt and Schwarz (2010, pp.103) argue that both perspectives resonate well with social innovations, because of the focus on concrete social practices found in theories of practice and the emphasis on creative action found in pragmatism. Both perspectives also highlight the material aspects of social practices (cf. Dewey 1929, Reckwitz 2002) and therefore enable a perspective of social and technical innovations that is simultaneously material and social.

So far, it has been argued that a dichotomous distinction between social and technical innovations as separate phenomena is of little value. This is because of two main issues:

- First, most empirical cases are likely to be a mixture of both social and technical/material aspects. Reducing empirical innovation dynamics to either social or technical determinants would simply miss the point.
- Second, the history of the term 'innovation' shows the different meanings it has carried over the centuries. Therefore, there is no 'inherent' meaning to the term. What unites social and technical innovations in the modern understanding is the shift towards a positive connotation. This leads to a more general conceptualisation in which innovation is seen as a specific instrument of social change.

Distinguishing between technical and social innovations then becomes a matter of (1) the ways in which both are reflexively brought about on the level of creative social practices, (2) the criteria by which their novelty, usefulness and impact are judged (e.g. technical effectiveness, economic efficiency, cultural values), and (3) how the changes and adaptations they occasion may vary within and across societal fields (concerning their stabilisation and transformative potential). Rather than strictly separating social from technical innovations, this would highlight first the way that both are socio-technically created and stabilised and second how innovations as such have become a central means of change and transformation in modern societies.

3. Distinguishing social innovation from social change

Even though social innovations cannot be fundamentally separated from technical innovations, we can still maintain that the former are predominantly oriented towards social issues, whereas the latter tend to be regarded in techno-economic logics. Social innovations, in essence, are seen to be agents of social change. In contrast to classical understandings of evolutionary, undirected and long term social change, social innovations can be outlined by six characteristics.

- (1) The first important characteristic of innovation concerns the *deliberate nature* of innovative change. Innovation is not an undirected transformation that occurs unbeknownst to actors. Rather, it is a purposeful endeavour, undertaken with intent and

deliberation. This does, of course, not imply that innovative change can be fully controlled by the actors involved. Like all social processes, innovations are subject to unknown conditions and unintended consequences of action (Merton 1936).

(2) This *open-endedness* of innovations makes them such an intriguing subject matter. Innovations can never fully promise to solve a problem at hand; instead, they must be monitored, maintained and transformed all throughout the innovative process. When innovations become a central means of social change, this in turn is most likely to occasion further changes and subsequent innovations. In short, innovation breeds more innovation.

(3) The third characteristic concerns the temporal dimension of innovations. Innovations are typically viewed as such within a *limited duration*, until the next innovation occurs. Rammert argues that innovations have a ‘middle range’ temporal extension. They are not as short-lived as mere fads or fashions. Nor do they possess the longevity of epochs (Rammert 2010, pp. 29). Of course, some social innovations may span centuries, like modern social security systems. However, they also undergo significant changes over time, and are continuously adapted and re-invented. The temporal extension of innovation resides in the fact that, following the arguments of Schumpeter (1939), inventions only become actual ‘innovations’ once they diffuse and are stabilised in durable arrangements.

(4) Of course, innovations need to entail at least some form of *novelty*. This novelty is constitutive of the innovation, but it does not necessarily need to spring from the deliberate actions or creative ideas of innovators. Because social innovations do not revolve around a material artefact, their novelty and the reasons why they become accepted and stabilised may emerge out of the innovation process itself and its unintended consequences more so than with technical innovations. Novelty, first of all, is little more than a disruption of the old, a discontinuation that may either emerge or be created (in Schumpeter’s sense of ‘creative destruction’ 1942, pp. 81)

(5) The fifth characteristic concerns the *scope* of innovations. The common distinction between incremental and radical or evolutionary and revolutionary innovations points to the relation of innovations with other structures. Radical or revolutionary innovations may disrupt social order, whereas incremental and evolutionary innovations may preserve the status quo, albeit with some slight adjustments. Some social innovations might even be conceived to forestall larger impulses towards social change, similar to the implementation of social security laws in the late 19th century in terms of curtailing larger socialist agendas.

(6) Last not least, innovations always have a ‘*product*’ or ‘*artefact*’¹, something that will be created and stabilised, something that takes form until it becomes a format. This stabilised artefact of innovations stands at the end of the innovation process, but it can also be used as the retrospective starting point to trace the innovation back to its beginning.

In sum, the deliberate yet open-ended nature, the limited duration with the aspects of novelty and the differences in scope and the innovation artefact to be created can be used to distinguish social innovations from general processes of social change. Of course, these are

¹ Valentin Janda and Jan-Hendrik Passoth have suggested to me the somewhat catchy yet quite untranslatable German neologism ‘das Innovat’ for this product of innovation. The term appeals to me, but I will refrain from using it – untranslated – in this paper.

not exclusive characteristics of social innovations, but when used in a bunch, they help to outline the general idea and to narrow down the immense variety of their empirical instances.

Whereas social change can be used to describe any larger transformation in social and cultural patterns, social innovation primarily denotes the *mindful and instrumental intervention* in ongoing social processes (cf. the notion of ‘social engineering’, Popper 1945). For instance, changes that are driven by the social tensions of modern capitalism, as Marx would have it, are not social innovations as such. Only when specific transformations are created as means to an end might they be considered social innovations. This leads to the question of how much innovations (social or technical) drive social change and how societies adapt to an ongoing stream of innovations (Moore 1960, cf. also a series on social innovation in the German economic journal ‘brand eins’). In addition, social innovations are primarily considered to be bottom-up, rather than top-down transformations. They are not ‘interventions’ that go against the public will, but ‘inventions’ that go with it (Whyte 1982). Thus, and in contrast to social change per se, social innovations may have limited duration and impact, but they are much more deliberate in the terms of the direction of change.

Even though social change and social innovation should not be equated, they also cannot be completely separated, because social change in modern societies most often occurs through social innovation (marking them as ‘innovation societies’, Hutter et al. 2011). We are thus concerned with *social innovation as a mode and means of social change*. As a *mode* of social change, social innovations have become the predominant motor of societal transformations. In line with Ogburn’s observations on social change, this first of all indicates a quantitative increase of innovations. Social innovations can be seen all throughout the history of mankind, but modernity is characterised by their dominance in many different societal fields. Also, innovations are not rare events, but instead occur in rapid-fire succession. The societal scope and temporal density of social innovations marks them as a salient mode of social change. As a *means* of social change, social innovations are used in an increasingly reflexive manner. This denotes a qualitative change in the societal understanding of social change itself. Early forms of social engineering and technocratic visions of a better society (cf. Veblen 2006[1921]) mark the beginning of the transition from a mere quantitative increase of innovations in society towards a new quality of deliberately seeking social innovations to promote social change. This trend continues up until today and, especially in recent years, social innovations seem to have become a prime means of encouraging and directing social change on many political levels, from local grassroots initiatives to large-scale European programmes (see section 6).

As a means of contemporary social change and in contrast to technocratic understandings of social engineering in the first half of the 20th century, social innovations today are – as mentioned – predominantly considered to be bottom-up, citizen-driven, local solutions to specific problems (cf. MacCallum et al. 2009). This again increases the reflexivity of social innovations. Not only are they considered to be an important means of social change, but also to be best organised by involving many different actors and perspectives without domination through hierarchical planning and control. Thus, social innovations are seen as a means for organising change that cannot be fully planned or controlled. In addition, their limitations as temporal and local solutions are acknowledged by increasing the societal scope and overall tempo of social innovations. This way, no single social innovation needs to promise a positive outcome; instead, an unending stream of innovations must safeguard against the fallacies of hierarchical planning and facilitate a stronger involvement of the public in matters of social change.

The idea of innovation as a means of social change therefore must be seen as a question of the reflexive dynamic between social innovations and society. This question will be addressed

in the next section by sketching out a theoretical framework which allows us to conceptualise the interdependencies of social innovations situated in emerging innovation societies.

4. Reflexivities of social innovations

When social innovations are reflexively used to stimulate and govern social change, they do not remain simple modes of transformation. As indicated above, social innovations as means of change today may have become ends in themselves. The positive normative expectations imbued in the term mark it as a general solution to many divergent problems (cf. Mulgan 2006). The gradual change of social innovations from a more or less unreflected mode to a deliberate means and finally to an end in themselves delineates an increase in the reflexive use of social innovations. This essentially leads to the question of how novelty and social change are actively created in modern societies (Hutter et al. 2011). If novelty and innovation become ends in themselves, this may on the one hand lead to greater social creativity, but on the other hand it may also abstract from the actual substance of novelty and innovation and lead to a successive staccato of irrelevant inventions, which do not ultimately evolve into more durable innovations.

So far, the reflexive use of social innovations has been primarily addressed as a shifting orientation towards social change in society itself. Social innovations can thus be seen as an aspect of reflexive modernisation (Beck et al. 1994). Whereas classical modernity paved the way by imposing permanent technical innovation upon society – very much like Ogburn observed – social innovation and innovation per se have now become a reflexively wielded instrument to initiate and govern societal change. If it is true that a societal awareness of continuous directed change is an – if not *the* – essential feature of modern society and if it is true that specific understandings and promises of innovation are increasingly employed to tackle the problems associated with this type of change, this would indicate two related dynamics of transforming society through reflexive innovation. The first dynamic concerns the changes brought about by reflexive innovations themselves. When social innovations are reflexively used to control and guide social change, they at the same time become distinct means of governance. This, in turn, relates to a second, less obvious but perhaps even more powerful dynamic of an innovation perspective on social change. When innovations become a dominant means of social change, they deeply influence the epistemology of social change, i.e. the ways in which societal needs and aims are observed, evaluated, and implemented.

Three meanings of reflexivity

Before each dynamic is discussed in greater detail, we need to clarify how these dynamics relate to general discussions about reflexivity and social innovations. ‘Reflexivity’ as a sociological term is both widely used and diversely defined (cf. Beck et al. 1994). For the purpose of this paper, I will distinguish between three meanings of reflexivity which I call *fundamental reflexivity*, *reflexivity of social order* and *reflexivity of consequences*. In short, the discussion of reflexive social innovations will concern the latter two meanings, and the two dynamics mentioned above will be related to them accordingly.

Let us first consider fundamental reflexivity and its significance for social innovation. As a sociological term, *fundamental reflexivity* has become well accepted. All social theories account for some basic reflexivity of human action in order to distinguish it from mere behaviour or instinct. This not only includes consciousness and self-consciousness, but also

an active engagement with the environment and interaction with others (Lynch 2000). In this fundamental sense, reflexivity can be reformulated as a problem of contingency or the human capacity for choice. It can also be traced back to anthropological considerations about the open-endedness of human conduct under conditions of uncertainty. Without going into any details of these discussions, fundamental reflexivity addresses some form of awareness of oneself and the environment (including others). In this basic capacity – as a part of any human action –, reflexivity also figures as a constitutive element of the social. However, it does not allow for any distinctions between more or less reflexive forms of social innovation.

The second meaning of reflexivity, the *reflexivity of social order*, is related to the first meaning, but specifically reformulated as a question of social order. Such an understanding is also common in sociological thought, for instance in the writings of Giddens (1984). In this sense, reflexivity denotes the recursive and continuous monitoring and ordering of social practices: ‘Reflexivity’ hence should be understood not merely as ‘self-consciousness’ but as the monitored character of the ongoing flow of social life’ (ibid., p. 3). In that way, it is not only a matter of doing things differently, but also of reproducing social order: ‘strategically placed actors seek reflexively to regulate the overall conditions of system reproduction either to keep things as they are or to change them’ (ibid., pp. 27). This meaning of reflexivity is situated at the level of basic sociological theory about the constitution of the social (‘Sozialtheorie’ in German). Translated to the study of social innovations, this would mean that in contrast to non-reflexive forms of social innovation, reflexive innovators are, first, more ‘self-aware’ of the fact that they are engaged in social innovations and, second, that this knowledge is used to engage with the innovation process itself. The recent increase in the use of the term would support such a reflexive use of social innovations, as a quick Google Ngram search suggests (figure 1). Books published during the peak between the early 1960s and the late 1980s include such diverse topics such as urban change (Rosenbloom 1969), community psychology and experimental social innovation (ESI, cf. Fairweather 1972), or the division of labour in the household (Gershuny 1983).



Figure 1: Ngram search of the term ‘social innovation’ in the English corpus of Google Books, 2 July 2013

Last not least, the third meaning of reflexivity, the *reflexivity of consequences* focuses on the societal consequences of increasingly employing social innovation as a distinct form of social change. This meaning of reflexivity is situated at the conceptual level of diagnostic social theory or critical social theory, seeking to analyse characteristics of modern society (‘Gesellschaftstheorie’ in German). This is the meaning, for instance, of ‘reflexive modernisation’ (Beck et al. 1994) which deals especially with the (problematic) ‘consequences of modernity’ (Giddens 1990). In contrast to the reflexivity of social order, the

reflexivity of consequences does not focus on monitoring and control, but rather unforeseen consequences, unintended effects, ambiguities and things getting out-of-control: ‘‘Reflexive’ does *not* mean that people today lead a more conscious life. On the contrary. ‘Reflexive’ signifies not an ‘increase of mastery and consciousness, but a heightened awareness that mastery is impossible’ (Latour 2003)’ (Beck et al. 2003, p. 3). From this perspective, social innovations can be both a problem and a solution. On the one hand, they can be seen as a solution to the failing hierarchical modes of planning and governing of classical modernity and thus become a central mode of change under conditions of reflexive modernisation. On the other hand, they may also pose new problems by producing unintended consequences, for instance a preoccupation with the promises of novelty and a neglect of modes of stabilisation – thus adding to the ambiguities of reflexive modernisation. Either way, social innovations in reflexive modernity cannot be seen as purely social, but must be seen as socio-material processes, since ‘reflexivity in the second modernity is profoundly socio-*technical*.’ (Lash 2003, p. 55).

The above discussion of different meanings of the term reflexivity sketched out three different perspectives: the first is fundamental or anthropological, the second concerns social order *per se*, and the third regards societal consequences of modernity. Each perspective addresses different aspects of sociological inquiry and I will now go into more detail as to how the latter two perspectives relate to two concrete dynamics associated with social innovations.

Reflexivity of social order

The first dynamic primarily addresses the issues of change and stability in processes of social change, which has always been a central topic of sociological inquiry. Mead, for instance, put this binary in the focus of his discussion of the evolution of human societies:

‘That is the problem of society, is it not? How can you present order and structure in society and yet bring about the changes that need to take place, are taking place? How can you bring those changes about in orderly fashion and yet preserve order? To bring about change is seemingly to destroy the given order, and yet society does and must change. That is the problem, to incorporate the methods of change into the order of society itself.’ (Mead 1936, pp. 361).

Mead saw the scientific method as central means of change in modern societies, a means which allowed for a controlled and reflexive engagement with societal problems. For Mead, the scientific method first of all is a method for becoming aware of problems, for imagining possible alternatives and finding an adequate solution by testing it. The evolution of society and the emergence of novelty therefore do not happen ‘behind the backs’ of actors, but are due to their conscious involvement, which on the one hand creates durable institutions and on the other hand questions their existence. The relation of change and stability thus becomes the prime question for the constitution of social order. For modern societies, this relation is increasingly a matter of awareness or reflexive management.² Though we might not share Mead’s confidence in the scientific method as the prime model for the advancement of modern societies, his general insights into the evolution of methods for controlling societal change do point us in the right direction.

Similar to Mead’s understanding of scientific inquiry, social innovations link stability and change through the creation of novelty. In this sense, there can be no radical novelty, but only

² Of course, the increased reflexive use of social innovations can be seen in itself as an innovation which was recently promoted by interested actors, including social scientist. And as we have seen in section 2, the term innovation itself has taken on quite different meanings in the past two centuries.

novelty that is created by variations of past habits and in expectation of the future. Mead calls this the process of ‘emergence’, which he sees as a fundamental feature of human action (Mead 1932). For social innovations, we might lower the criterion for novelty even further. Social innovations might not be novel in the sense that they entail a distinct form of newness, but in that existing social practices are transferred to other societal realms. Or, something might be neither distinctly nor relatively new, but only perceived or labelled as novel. This way, reflexive social innovation would not have to be concerned with creating novelty in itself, but with monitoring the diversity of social life and looking for already developed yet locally confined solutions. This would amount to a more or less evolutionary or ecological approach of ‘niche management’ (Kemp et al. 2001), in which the dynamics of social life are seen as a motor for producing manifold variations – or inventions – which might be taken up and extended across time and space in order to become innovations. In contrast to hierarchically and planned modes of change, the evolutionary model entails a more open wait-and-see attitude which dispenses with ideas of deterministic control.

When social innovations become reflexive means of social change, questions of where to locate emergence, as well as the source of novelty and creativity, come into focus. Depending on where that prized yet unpredictable locus is situated, using social innovations reflexively also means to realise them differently. In contrast to biological evolution, social innovation is rarely ‘blind’. Therefore, novelty is no simple variation or mutation, but it is always oriented toward solving something which is perceived as a societal problem. A broad societal and reflexive use of social innovations as means of social change consequently points to a plurality of modes of social innovation. And in addition to diverse understandings concerning the emergence of novelty, we would expect to find assumptions of how creative inventions become stabilised in durable innovations. For instance, if reductionist ideas of technical innovation are taken as blueprints for social innovation, they would include the creative power of entrepreneurial actors, but they would also imply mechanistic assumptions about the diffusion of innovations based on the logic of efficiency. On the other hand, ideas that stress the mutual constitution of technological and social change would argue for creative solutions emerging out of an interactive trial-and-error process, which do not simply diffuse, but are actively produced and transformed through multiple translations as they progress through society (Latour 1986). Thus, when social innovations become reflexive means of social change, they must not only account for their capacity to produce creative variations, but also whether they are able to be transformed into and implemented in durable socio-material patterns (cf. Gillwald 2000 and section 6 on the EU initiatives).

Looking at the reflexivity of social innovations from the perspective of social order, we can observe that the promises of innovation per se have captured the imagination of many societal fields, even to the point of becoming a powerful imperative for innovative action (Hutter et al. 2011). When social innovations become reflexively integrated in the production of social order, i.e. in the ‘monitored character of the ongoing flow of social life’ (Giddens 1984, p. 3), this may initiate an increasing pressure to focus on novelty as a dominant and legitimate feature of its re-organisation. If such a major transformation is still currently in progress is an open empirical question. A mere increase in the rhetoric and discourse about social innovation must not directly relate to an increase in the organising of social change or its practical accomplishment. Various modes of ‘decoupling’ (Meyer/Rowan 1977), e.g. between talking about and doing social innovation, are likely to mediate between the fashionable term ‘social innovation’ and the many practical instances of change which might not make use of the term at all.

In addition, if social innovation becomes a pervasive form of social change, this would most likely lead to more or less routinised social innovations, which in the end may severely restrict their degree of novelty. Here we encounter a distinct problem of social innovation,

which will be addressed in more detail in section five. That is, with classical technical innovation, novelty can be easily framed as an increase in technical or economic efficiency. Such a simple criterion of evaluating progress does not hold for social innovations – rather, social innovations are embedded in multiple frames of reference and evaluation. Routine social innovation implies some form of logic that guides activity, otherwise its novelty will imply only a difference to what previously existed, but there will be no criterion to measure an actual ‘improvement’. In the end, reflexive social innovation would require greater knowledge of how social innovations actually function and would have to apply this knowledge to manage reflexive social innovations.

Giddens (1990, pp. 36) uses reflexivity in this sense to distinguish between traditional and modern societies. Modern societies, he argues, become increasingly reflexive. The social innovations in the 19th century can already be seen as an indicator for this process, since ‘the reflexivity of modern social life consists in the fact that social practices are constantly examined and reformed in the light of incoming information about those very practices, thus constitutively altering their character’ (ibid., p. 38). Even more so, innovations themselves become modern instruments for continually revising conventions which pervade ‘all aspects of human life, including technological intervention into the material world’ (ibid., p. 39). Social and technical innovations thus originate from the same source of modernity, both being reflexive modes of creating change. But this form of increased reflexivity as ‘the continual generating of systematic self-knowledge’ (ibid., p. 45) does not denote a greater degree of control through increased knowledge of the underlying social mechanisms; rather, it creates unintended consequences which need be subsequently addressed.

Summing up, the reflexivity of social innovations on the level of social order can be analysed in a twofold dynamic. First, by examining the integration of an innovation model of social change into the governance of social order. Innovativeness (both in terms of novelty and durability) would thus be conceptualised as a central criterion along which diverse sets of actors monitor the flow of social life around them and organise their actions. In this view, social coordination would be based on a shared orientation towards social innovation and the relation of stability and change which underlies it. Second, under the conditions of a knowledge society, this integration would be accompanied by an increase in conceptual knowledge about social innovations, and perhaps even specific theories of social innovation. Increased reflexivity would then lead to studying how the concept social innovation is itself a social innovation, both for better understanding its internal dynamics, as well as those of actual innovation processes. This sounds more cumbersome than it actually is. Empirically, we would simply assume that the societal discussion of social change references social innovation on many different levels and also distinguishes among what it comes to regard as ‘real’, ‘fake’ and ‘routine’ social innovations.

Reflexivity of consequences

Now let us consider the second dynamic, the reflexivity of consequences. This perspective allows us to analyse the unintended side effects and ambiguities of ‘runaway’ social innovation.³ Again, this can be simpler than it sounds. For the purpose of this paper, I will distinguish between two modes of rampant innovation. The first is the closest to a common

³ The reflexivity of consequences used in the sense of reflexive modernisation (Beck et al. 1994) emphasises the problems and tensions emerging from unanticipated consequences (Merton 1936). This negative bias is a salient feature in this discussion, however, we can equally assume that the reflexivity of consequences produces positive effects. For the purpose of the paper I will nevertheless concentrate on possible negative consequences.

understanding of the term, i.e. describing the condition that social innovations have become an end in themselves, universally applied with little thought as to their efficacy. In this sense, social innovations have become the rampaging ‘golems’ of modern societies, indiscriminately casting all social problems as dire candidates to be solved by social innovation. I deliberately exaggerate this dynamic to the point of caricature in order to break with the dominant positive connotations currently attached to the terms ‘innovation’ and especially ‘social innovation’. In one scenario, an overly positive idea of social innovation could result in an increasing association of innovation primarily with change while neglecting the critical aspect of stability, which in turn might produce a rapid succession of novelties without any ties to the fabric of social order. A second aspect of novelty gone astray is more subtle. Ideas about social innovation become so deeply embedded in the governance of social order that they grow to be largely taken-for-granted, invisible and, hence, out-of-control. This argument can be made along the same lines as Winner’s (1977) depiction of ‘technics-out-of-control’. Winner argues that some technologies have such deeply embedded political characteristics that they can be regarded as inherently political technologies (Winner 1980). This is not to say that technologies determine politics, but that some technical and political orders are very much compatible: ‘The available evidence tends to show that many large, sophisticated technological systems are in fact highly compatible with centralized, hierarchical managerial control.’ (ibid., p. 132). Winner uses the example of nuclear power to highlight the mutual stabilisation of centrally organised technology and centrally organised control, i.e. of nuclear power and the nation state. Thus, once the decision for a specific technology and its inherent order are made, it is hardly reversible and increasing beyond the grasp of deliberate choice; it is, in other words, out-of-control. In the following paragraphs, I will follow the latter understanding of out-of-control and relate it to the question of social innovations as well as recent discussions of performativity (MacKenzie 2006).

Let us first consider how we can translate Winner’s ideas concerning concrete and material technologies such as nuclear power to the study of intangible social innovations. One line of thought has been pointed out already, namely that social innovations more often than not are socio-technical endeavours. We would then have to look at the material or technical aspects of social innovations in order to find their hidden political nature and then determine how compatible this is with a specific political order of social innovations. When studying the material side of social innovations and how they might go awry, this is in fact a promising perspective on the mutual constitution of the technical and the social. Another line of thought was mentioned only briefly: thinking of social innovations as forms of ‘social engineering’ (Popper 1945) allows us to conceive of them as social technologies. The inherent political nature of social innovations as social technologies then lies in their instrumental perspective on the social. Social innovations carry with them, in a way, specific ideas how social change can be ‘engineered’, i.e. some kind of knowledge about specific locales and methods for initiating social change: rather bottom-up than top-down and rather participatory than hierarchical. Such a ‘grassroots’ idea of engineering obviously differs from a classical understanding, yet without similar promises of effectiveness and efficiency, social innovations would hardly be undertaken. By being ubiquitously employed, concepts of social innovation subsequently become deeply ingrained in the management of social change, co-formatting the way social change is perceived and organised. This argument would be stretched too far if it began to portrait social innovation as a colonising, deterministic force. Rather, this discussion makes us sensitive to certain aspects of social innovations under the conditions of reflexive modernity, highlighting the possible adverse effects if they are pervasively employed as political instruments. To name just two examples: first, concepts of social innovations often draw upon an underlying entrepreneurial ideology (Mulgan et al. 2007, Phills Jr. et al. 2008), especially when formulated from an economic perspective.

Second, they may force objective criteria for evaluating the actual ‘innovativeness’ of an alleged social innovation, especially under the conditions of scarce resources and an increased legitimacy of innovation (Preskill/Beer 2012). In this way, the reflexive consequences of social innovations would occasion a more or less uncontrolled shift in the epistemology and evaluation of social change.

We can extend this argument in a second step by further analysing how reflexive social innovations may become means to both perceive and manipulate social change. For instance, arguments about the performativity of economics (Callon 1998, MacKenzie 2006) discuss how economic theories shape economic realities. As dominant paradigms, economic theories guide the actions of market actors and, by shaping economic actions, the market models slowly become market realities. Similarly, concepts of social innovation entail specific knowledge about the social world and its functioning, i.e. about the relation of novelty, change and stability. Following Giddens argument, social innovations have become part of the reflexively applied knowledge through which modernity is constituted and they thereby shape or guide the actions taken towards managing social change. Seen from the reflexivity of consequences, knowledge about social innovations will not necessary result in the increasingly skilful management of social change, but may entail new uncertainties and ambiguities, since this reflexive knowledge about the social world ‘contributes to its unstable or mutable character’ (Giddens 1990, p. 45).

In order to analyse the reflexivity of consequences for social innovations, it is helpful to consider their performative effects on three levels, which can only be hinted at here (see Hutter et al. 2011 for a more detailed discussion). The first is the *semantic level* of societal discourse. Undoubtedly, the use of the term ‘social innovation’ has increased in the social sciences, politics and the public sphere. However, different concepts of social innovation are likely to highlight different aspects or promises (‘bottom-up’, ‘entrepreneurial’), perhaps to the point of presenting incommensurable claims. Second, changes on the semantic level would have to relate to changes on the *grammatical level*, i.e. the extent to which social innovations transform the actual organisation of change. For instance, evolving practices of monitoring and evaluating social innovations would indicate an increasing performativity of social innovations. Last not least, we would assume to find changes on the *pragmatic level* of concrete actions. Concepts of social innovations would then guide numerous social practices concerned with social change. Of course, all three levels are interlinked and in order to analyse the reflexivity of consequences of social innovations, we would have to come up with a portrait of their interrelated dynamics, i.e. in how far they mutually enable and constrain each other. Especially under the conditions of reflexive modernity, we are not likely to find a clear-cut concept of social innovation becoming a dominant paradigm, but rather a multitude of heterogeneous and inconsistent ideas, which are generally subsumed under the label of social innovation. And as Giddens pointed out, an increased knowledge about the social world is likely to increase ambiguities and uncertainties instead of reducing them. In the following section, such increasing difficulties of defining social innovations will be discussed.

5. Multiple references of social innovations

Without doubt, technical innovation remains the main reference for social innovations. It provides the general positive association of innovation with novelty and progress. Technical innovation also provides two clear dimensions along which innovativeness can be measured: technical effectiveness and economic efficiency. This close and dominant interrelation of technical and economic features in technical innovations serves as the first distinction

between technical and social innovations. Of course, reducing technical innovations to mere technical and economic features is far too restrictive, but for the sake of the argument, we will retain this distinction as a heuristic that provides an effective contrast to social innovations. From the outside, technical innovation seems to be a straight-forward matter of efficiency and effectiveness, whereas social innovations are less easily defined. In the following paragraphs, I will outline the multiple references of social innovations in order to sketch out a general picture in which the discussion of social innovations can be situated (cf. Rammert 2010).

The characteristics of techno-economic innovations have been seminally defined in the works of Schumpeter (here especially Schumpeter 1939, pp. 72), where innovation is seen as the internal motor driving economic evolution. Techno-economic innovations themselves are mainly driven by entrepreneurial ‘technology push’ action and not by consumers ‘demand pull’. Using the case of railways, Schumpeter argues that consumers cannot formulate a novel demand until a novel product actually creates that demand.

(1) The first characteristic of innovations would thus be *entrepreneurial action* and this is also a main reference of social innovations (Phills Jr. et al. 2008). ‘Entrepreneurial’, however, must not necessarily be equated with ‘economic’. Interestingly, Schumpeter himself does not restrict the term ‘innovation’ to mere technical innovation, but also includes the creation of new markets and organisational forms – his main reference for innovation being the economy. In his own words, innovations are ‘any “doing things differently” in the realm of economic life’ (Schumpeter 1939, p. 84). Some social innovations can thus be framed in economic terms, like Tayloristic approaches to reorganising work, but other social innovations, just like Tayloristic production itself, may also extend into other frames of reference, like political and civil realms. Relating social innovation to entrepreneurial actions while extending both concepts beyond strictly economic rationales resonates well with the sociological insight that change and stability in modern societies are increasingly created and sustained by interested parties. For instance, Hughes (1936) argues that institutions in modern societies have become more flexible and dynamic, and it is the ‘consequent precariousness of their existence that makes institutions, perforce, enterprises’ (ibid., p. 138), which require active reproduction. Hughes views the entrepreneur as a person ‘who undertakes to coordinate the activities of others’ while he also ‘makes decisions and meets contingencies’, both of which in the end ‘become[s] a crucial feature in a society where the mores, whatever else they may do, do not foreordain that the individual shall stay put and remain within’ (ibid.).

(2) The second characteristic of innovations in a society where individuals ‘do not stay put’ and constantly ‘do things differently’ is of course *novelty* itself. Here, Schumpeter emphasises the difference between invention and innovation. Invention, according to Schumpeter, suggests some sort of scientific novelty, which is not at all at the core of his understanding of innovation: ‘Innovation is possible without anything we should identify as invention and invention does not necessarily induce innovation, but produces of itself no economically relevant effect at all.’ (Schumpeter 1939, p. 84). Doing things differently therefore does not presuppose novelty in the sense of invention, but extends it to new uses of existing means or resources. Innovation, in Schumpeter’s sense, concerns the economic exploitation of novelty, irrespective of how it is brought about and where it occurs. In other words, innovation does not presuppose genuine novelty, but may combine existing elements in a new way. For Schumpeter, the novelty of innovations is not interesting in terms of novelty as such, but in the way the new replaces the old. His now famous formulation of ‘creative destruction’ (Schumpeter 1942, pp. 81) underscores this point neatly. Schumpeter based this idea on the writings of Marx and Engels, who defined it as a main characteristic of capitalist economies, but for him it captured the essence of innovations as factors in economic growth: Innovations in a capitalist economy spur the never-ending cyclical development in which the new replaces the old by increasing chances for profit. And innovations themselves

are driven by entrepreneurs, who creatively seek to exploit such opportunities. The emphasis on creative destruction occurring through entrepreneurial actions nevertheless tends to highlight processes of change over stability.

(3) As a third characteristic of innovations, their *stability* is equally important for Schumpeter. Only after they have become widely accepted can the entrepreneur reap the profits and make up for previous investments. In economic terms, the entrepreneur is interested in keeping innovations in place until their returns diminish and it is time for a novel innovation. Exploiting innovations along an s-curve of increasing and diminishing returns is, of course, a distinctly economic logic and it would be quite difficult to apply such measures in different realms. But it does point to the interesting question of whether innovations (based upon a cyclical logic) have an internal 'sell-by-date' which depends on the societal field in which they are employed and on the scope they acquire. Schumpeter's innovation cycles, e.g. in the case of railways, typically last for some decades. The plurality of social innovations would suggest that we find time spans which significantly vary from those of a typical business cycle. It is also uncertain whether social innovations, like economic innovations, suffer from diminishing returns. In addition to profit development, the question of stability also points in another direction, namely that of resistance to change. Schumpeter is quite aware that innovations have to overcome substantial hurdles in the form of basic resistance to novelty, habits and the uncertainty associated with innovation. Innovations are therefore less likely to be radically new than partial readjustments of existing practices.

Single- and multi-referencing innovations

Schumpeter's insistence on the dominant economic reference of innovations on the one hand limits the scope of his arguments. On the other hand it helps us to identify a very basic distinction in the references of social innovations. (Social) innovations in the economy can be defined as *single-referencing innovations*, i.e. innovations valued in their own right in the sense that they are inherent to the economic system, driven by internal forces and evaluated in economic terms. This *Schumpeter-type innovation* emphasises the creative/innovative processes which fundamentally govern a specific societal field. For instance, innovativeness in modern sciences and the arts also follows an internal logic of novelty and 'out with the old, in with the new'. In science, new theories, methods and instruments constantly challenge established arrangements. In the arts, new ways of painting, sculpting or performing compete for acceptance and funding both among themselves and with established forms. Single-referencing is thus not aimed at the level of the innovation itself, but must be understood in an evolutionary and ecological manner, which relates innovations primarily to the dominant logics of creating and evaluating change applied within the societal field in which they occur. *Multi-referencing innovations* present a different case. These types of innovations would not be driven by some internal logic of a given field, but instead be better understood as adaptations to changes in the environment. I will refer to this category as *Ogburn-type innovations*, provided that they are primarily oriented towards decreasing the lag or tension created by any maladjustment between different societal spheres. This describes many social innovations in the political realm, reacting for instance to innovations in the economic or technical realm. Multi-referencing social innovations then refer not to an internal logic of change, but are seen as solutions to specific social needs (Mulgan 2006). Whereas single-referencing innovations are mainly targeted at growth, multi-referencing innovations in this sense are aimed at reducing deficits: they are not a means of staying ahead, but of catching up. Despite their differences, both types of social innovations are inextricably linked with the dynamics of modernity and, as Ogburn would argue, the fast-paced speed of single-

referencing innovations in one area (e.g. the economy) creates a need for multi-referencing innovations in others.

Both social and technical innovations can either be single-referencing or multi-referencing. And a close scrutiny of single-referencing innovations would most likely reveal that there will be no pure single reference, but rather one dominant reference among others. Finally, because of the progressing reflexivity of innovations, single-referencing innovations might actually be increasingly replaced by multi-referencing innovations in an innovation society. However, this complex and probably seamless web (Hughes 1986) of innovations will prove difficult to trace.

From this perspective, the distinction between single and multi-referencing social innovations does not entail an essential difference between the two, but highlights the key issue of how they are evaluated. Since innovation is primarily a means of initiating and implementing change, it is not evaluated by itself, but in terms of what it enables. A good innovation is not characterised by the adherence to an abstract scheme of ‘best-practice innovating’, but instead by its result. Of course, when innovation becomes a reflexive means of social change, it is believed to have an inherent quality which distinguishes it from other means of change. Yet this quality is not regarded in its own right, but as a vehicle for something else. However, innovations and the outcomes they enable should not be thought of as completely separate. Rather, innovations, their outcomes and the evaluations of both are essentially interlinked, that is, they are mutually performative. In order to disentangle this relation, I will draw on Dewey’s (1939) theory of valuation which criticises a dichotomous distinction between means and ends and which has inspired the recent interest in valuations (cf. Kjellberg/Mallard 2013), especially a sociological reconsideration of economic actions (Boltanski/Thévenot 2006[1991], Stark 2009, Beckert/Aspers 2011).⁴

References and valuations

Dewey argues that the common distinction between relationally valuable means and inherently valuable ends builds upon a simplistic dichotomy between the two concepts. This difference is also prevalent in different uses of the term ‘valuing’. On the one hand, it connotes what Dewey refers to as ‘prizing’, i.e. as holding something precious in itself. On the other hand, it refers to ‘appraising’, i.e. the process of putting a price or value on something (ibid., p. 5). Dewey sees prizing as a more personal and emotional affair (a matter of desire), whereas appraising is a matter of intellectual calculation (a matter of interest). However, both are aspects of larger issues of valuation as he conceives valuation to be a basic process in all human affairs (ibid., p. 57). His main argument is that neither desires nor interests exist in isolation from the actions or means which are employed to satisfy a certain need. As Dewey puts it, desires and interests are not ends-in-themselves, but rather ends-in-view. The basic conception of ends-in-view is that there is, first, no dichotomy, but a continuum between means and ends and that, second, ends and values are created in processes of change and contestation. Both aspects of ends-in-view provide fruitful engagements with the questions of the multiple references and valuations of social innovations.

Let us first consider the notion of ends and valuations being formed in processes of change and contestation (ibid., pp. 33). Dewey proposes that ends and values only come to matter if the taken-for-grantedness of routine conduct is disturbed: ‘When things are going

⁴ As far as I can see, the promising links between studies of social innovations and studies of valuation processes have not yet been exploited and at the current stage this paper can only hint at some of these intersections.

completely smoothly, desires do not arise, and there is no occasion to project ends-in-view, for “going smoothly” signifies that there is no need for effort and struggle.’ (ibid., p. 33). The disruption of a routine denotes at the same time an intervention inserted in otherwise habitual processes of impulse and execution. Only in this disruption may ends-in-view emerge and intervene in the previous order of affairs and ‘it is only in such cases that valuation occurs’ (ibid., p. 34). Valuation is thus a fundamental social process which pertains to all human actions concerned with change or novelty. And this fundamental link between valuation and situations of contestation or trouble provides a good starting point for discussing the relation of valuation and innovation. Evidently, all innovative activity deals with some kind of problematic situation in the sense that the previous order of things is perceived to be undesirable and actions are undertaken so as to bring about a more favourable situation.

The resolution of the problematic situation then rests, according to Dewey, on two assumptions. First, the identification of the problem to date has been inadequate and, second, the measures to be taken will prove appropriate for resolving the issue. Both assumptions entail valuations of the situation at hand, of the means employed and of the ends to be achieved. Differences in evaluating innovations thus reside in different evaluations of the adequacy of the definition of the problematic situation and the appropriateness of the means to resolve it. It follows that multi-referencing social innovations in particular may not always be seen as adequate solutions for a designated problem. Rather, the way in which a social innovation frames a specific problem and the means to solve it, can become an issue of contestation. Thus, we can extend the issue of valuation raised above: it is not only the outcomes that are evaluated, but also the means with which they are brought about. As Dewey himself emphasises: ‘*Propositions in which things (acts and materials) are appraised as means enter necessarily into desires and interests that determine end-values.*’ (ibid., p. 35.). Valuations of outcomes then depend on the valuations of the means to the extent that these outcomes depend on the means intended to achieve them. The distinction between technical or economic innovations and social innovation thus cannot be fully explained by referring to different values in different fields. Based on Dewey’s theory of valuation, functional technical effectiveness and profitable economic efficiency cannot be conceptualised as ‘final’ values within the fields of engineering or economics, but must be understood as being inextricably linked to the means employed to reach these ends. When transposing the concept of innovation from the technical and economic realm to broader societal fields, it does not suffice to point to a change in reference structures for valuating (the outcome of) innovations, e.g. aesthetics in the arts or participation in politics. Rather, the focus shifts towards the way these values are being achieved and transformed by turning to social innovation as a central means of initiating and conducting processes of change. In addition, valuations arise out of problematic situations, e.g. situations in which established ways of ‘going on’ are questioned and means and ends are mutually reconfigured.

This leads us to the second idea of a continuum of means and ends. Since Dewey so emphatically argues against the classical dichotomy of means as subservient to final ends (cf. also Dewey 1929[1925], pp. 121), the question of valuation cannot be answered fully without examining the relationship of ends and means in somewhat greater detail (Dewey 1939, pp. 40). The classical assumption about the separation of ends and means can be stretched to the point that the ‘end justifies the means’, which marks the strongest notion of an end independent of means. Such a statement, for Dewey, is quite absurd. Not only because it severs the inherent relations of valuation between ends and means, but also because it forecloses the possibility that the ends themselves can become means to further ends. For him, an end is only an intermediate stage in an ongoing process in which ends become means to further ends etc. This way, there is nothing final, i.e. independent, about an end; instead, it

unfolds in a network of references between ends and means, or, as Dewey puts it: ‘the distinction between ends and means is temporal and relational’ (ibid., p. 43).

Some ends however, may acquire the status of a custom within a social group. Such ends typically remain unquestioned and therefore seem to be relatively independent to the point of becoming seemingly ‘final’. Still, such ends refer ‘to a specifiable temporal *means-end relation* and not to something which is an end per se’ (ibid., p. 45). Seemingly final ends emerge in specific social groups. Dewey cites examples such as money making, political power, advancement of scientific knowledge and military prowess (ibid., p. 43). Obviously, the social groups and ends correspond to specific societal spheres: the economy, politics, science and military. We can easily add further spheres: the arts, religion, education, each containing specifiable means-ends relationships in the form of an institutionalised and seemingly final end. It must be noted that the unfolding of such means-ends configurations is a natural social process of slowly abstracting concrete ends into more abstract and general ends through repetition, routinisation and habitualisation. The existence of seemingly final ends must, however, not be confused with their development and analysis. Even though they transcend individual cases, they are inherently tied into the specific means-ends relationship of their respective social sphere. Or, as Dewey (ibid., p. 44) points out, abstract ends become means of regulating conduct, i.e. they become instruments of judgement and examination. To use more recent terminology, the abstracts ends are the medium and result of social practices (Giddens 1984). Over time, a social field ‘develops a sort of framework of conditions to be satisfied – a framework of reference which operates in an *empirically* regulative way in given cases’ (Dewey 1939, p. 47). The question of value and valuation is therefore not some abstract contemplation, but a very concrete element of social order and coordination. The stabilised relations of ends and means then constitute the fabric of social life as they are continuously reproduced and transformed in social practice.

How can we relate the continuum of means and ends back to the analysis of social innovations? If we conceive the references of social innovations in Dewey’s terms as regulative frameworks made up of specific relations of means and ends, we can follow the specifics of different single and multi-referencing innovations. Dewey himself provides a short illustration for the case of the economy:

‘The generalized ideal and standard of economy-efficiency which operates in every advanced art and technology is equivalent, upon analysis, to the conception of means that are constituents of ends attained and of ends that are usable as means to further ends.’ (ibid., p. 50)

This shows that even single-referencing innovations such as those found in the economy are not isolated means or even final ends. The generalised reference of economic efficiency dominates the valuation of innovations, both in their outcome and function. But this ideal simultaneously depends on innovations as a means of generating profit. If we stop viewing economic efficiency as isolated from the means of attaining it, the continuum of ends and means highlights the inseparable fusion of both as a relatively stable referential framework in the economy. Thus, it is not simply economic efficiency, but enhancing efficiency through innovative, i.e. creative, action which provides the basic reference structure for valuating. This might seem tautological in an economic context, since pursuing efficiency at all costs is an inherent contradiction and can thus hardly be an end in itself. Only when we strictly separate economic efficiency from other references does the monetary aspect become dominant.

The case becomes even more complex if we consider multi-referencing social innovations. If we see social innovations not as simple means, but as bundles of means and ends-in-view, we have to relate them to the specific reference structures of the fields within which they occur. Some fields, like the economy, science and the arts, have an inherent bias

towards novelty and change, whereas other fields, such as religion, typically take a more conservative stance. In fields with more conservative reference structures, social innovations might actually be employed in order to maintain a specific order – like in the case of Bismarck's social legislation, which was introduced to maintain the established political power structure (cf. Gillwald 2000). Diverging abstract ends, from creative destruction to the conservation of order, present different reference structures in which means and ends-in-view are combined. Consequently, this turns the analysis of the multiple references of social innovations into an empirical question guided by the analytical premise not to disassociate means and ends. But analysing how specific social innovations mesh with or oppose the existing reference structures is only one relevant aspect. On a larger scale, we can also conceive of social innovations as transforming the very reference structures that shape them. For instance, the OECD move towards sustainable consumption can be viewed as a social innovation which actively seeks to combine divergent reference structures from the economy, consumerism and politics. In this case, the durable reconfiguration of means and ends-in-view *is* the social innovation. This adds a new layer to the discussion of single or multiple referencing innovations because the frames of reference themselves are being addressed.

From Dewey's theory of valuation, the analysis of social innovations must target multiple references in terms of ends and means. This creates a complex analytical framework which targets the relations and references of social innovations (Rammert 2010). The relations 'old and new', 'useful and useless' are always embedded in referential systems (economic, political, etc.). Yet these systems are composed of temporarily stabilised means-end relationships. Therefore, these references do not finally determine the questions of what is 'new' and 'useful', but they are themselves subject to changes in the means-ends relations. Both relations and references of social innovations are continuously being tested, questioned and re-evaluated in terms of means and ends.

After the two main conceptual considerations concerning the reflexivities and references of social innovations so far, the last part of this report will empirically outline how social innovations are discussed in the realm of EU politics today. Since the peak of social innovations around the 1970s (visible in the Google Ngram search in figure 1), there seems to be renewed interest in the concept today, not just from the academic side, but increasingly also from politics. This would suggest that social innovations are now becoming a valuable (sic!) instrument in the political toolbox of the innovation society. Following the conceptual discussion, the empirical questions which remain is, if and how an increasing use of social innovations as means of social change in turn transforms the ends they are supposed to achieve. A full analysis of this topic would warrant a paper in its own right and cannot be provided in the present context, but a brief glance at some official European programs for social innovation helps to sketch out their reflexivities and references. As a matter of fact, it will be shown how the political use of the term 'social innovation' itself is the artefact of an innovation process promoted by an initiative of think tanks and social scientists in on the level of EU policy.

6. *Social innovation initiatives and institutions in the EU*

Social innovations are increasingly discussed in political, scientific and economic arenas. For instance, the issue received a prominent position on the EU agenda in recent years, which is in itself an indicator for the increasing reflexivity of social innovations. Moreover, the political programmes are framed within a distinct set of references. They mainly draw on the established notion of techno-economic innovations and propose social innovations as

solutions for increasing economic wealth, but also political participation, equality and cost containment. This overview is divided into *reports*, *initiatives* and *competitions* with a brief outlook on social innovation agencies. These are not separate entities or events, but rather resemble a close-knit network of social innovation entrepreneurs that link practitioners with research and political institutions.

Report: The Open Book on Social Innovation

The *Open Book on Social Innovation* (OBSI) published in 2010 by Murray et al. on behalf of the Young Foundation and the National Endowment for Science, Technology and the Arts sketches out political, civil and economic engagements with social innovation by framing them as:

‘the many ways in which people are creating new and more effective answers to the biggest challenges of our times: how to cut our carbon footprint; how to keep people healthy; and how to end poverty’ (ibid., p. 2).

The OBSI serves as a resource and reference for many EU social innovation initiatives and it frames social innovations by stressing two major deficiencies. First, *concrete social needs are not being met by today’s policy*. Social innovations are regarded as potential solutions for pressing societal challenges from climate change to health issues and poverty. Social innovations are thus regarded as Ogburn-type innovations which help to decrease tensions and inequalities arising out of the maladjustments and unintended consequences of modern societies – either the inability of classic political or market instruments to deal with complex societal challenges or the lack of resources to pursue social innovations on the part of the civil sector. And in this way, social innovations are framed as instrumental means with which to achieve the ends of reducing global warming and ensuring health as well as prosperity. This instrumental view of social innovation creates a close link with common understandings of economical and technical innovations as ways of being ‘new’ and ‘effective’. The close relation of social innovations with other innovations is further delineated in the OBSI by relating these innovations to fields like science and medicine, where innovation is supposedly better understood and mastered. Social innovations are thus assumed to include a transfer of innovation-related knowledge from these fields to the social, i.e. civil, realm. This conception essentially portrays social innovations as ‘innovations that are social both in their ends and in their means’ (ibid., p. 3). The main challenge for social innovations compared to other forms of innovation (i.e. in medicine or science) is that they cannot draw on a large corpus of knowledge, cases and methods. This brings us to the second deficiency, the *deficiency of knowledge*. In short, there is purportedly a lack of reflexive knowledge about social innovations which effectively impedes the instrumental or political use of social innovations despite their prevalence in society:

‘There [in medicine, science and business, C.S.] are strong institutions and many people whose job requires them to be good at taking ideas from inception to impact. There is little comparable in the social field, despite the richness and vitality of social innovation’ (ibid., p. 2).

This of course strongly resembles Ogburn’s idea of a lag. Other societal fields such as medicine, science and business accelerate growth through successful innovations, while the civil sector lags behind due to a lack of institutionalised innovation practices.

The dual deficiency identified in the OBSI at the same time frames social innovations as both solution and a problem. Whereas they are supposed to provide a solution for manifold societal challenges, there also is a need for a better understanding of concrete methods and application cases. As a solution, the general references of social innovations are clearly defined as novel and effective social means for attaining relevant social ends, specifically:

‘new ideas (products, services and models) that simultaneously meet social needs and create new social relationships or collaborations. In other words, they are innovations that are both good for society and enhance society’s capacity to act’ (ibid., p. 3).

Purely economic references are exchanged for abstract societal concepts, thus creating an overarching frame of reference which can include a multitude of sub-references for individual social innovations. As a solution, social innovations are clearly marked as means to an end. As a problem, however, social innovations are being transformed into an end in and of themselves. The supposedly insufficient knowledge base for social innovations indicates that social innovations may not yet have become fully reflexive instruments of social change. The OBSI itself can be seen as an effort to increase and collect reflexive knowledge about social innovations and to reinsert this knowledge into society. The means are temporarily assigned an ends status, because the ‘existing structures and policies have found it impossible to crack some of the most pressing issues of our times’ (ibid., p. 3). This status is supposed to hold until sufficient reflexive knowledge on social innovations has been gained.

The OBSI can thus be read as a general text for legitimising the concept of social innovations in the political realm. And the concrete references spelled out for social innovations more or less target specific issues at stake in politics (ibid., pp. 3):

- First, the inherent complexity of current societal problems and the failure of classic policy and market instruments.
- Second, rising costs in many fields from medicine to the environment and the inability to implement successful countermeasures to reduce these costs.
- Third, the continued dominance of state-oriented centrally and hierarchically controlled methods which neglect the innovativeness of local actors.

The general failure of the state and market to solve pressing societal problems thus calls for an increase in social innovations, which, at the same time entails a shift in responsibility from the state to local actors in a novel ‘social economy’. This perspective ‘handles complexity not by standardisation and simplification imposed from the centre, but by distributing complexity to the margins – to the local managers and workers on the shop floor, as well as to the consumers themselves’ (ibid., p. 5). The reflexive knowledge to be generated is also outlined (ibid., pp. 6), for example: there need to be better *metrics for evaluating* the success of social innovations, more favourable *organisational forms* in which they can be conducted and more integrative *coalitions and networks*, since social innovations typically evolve through cooperation among different organisations. We can see that the reflexivities and references of social innovations are equally addressed to form a package that proposes social innovations as potent means for creating solutions to pressing problems (cf. the innovation lifecycle, ibid., pp. 12). In a way, the OBSI is concerned with politically innovating of the concept of social innovation itself.

Report: Study on Social Innovation

The 2010 *Study on Social Innovation* (SoSI)⁵ is quite similar to the OBSI and was prepared by the Social Innovation eXchange and the Young Foundation as an overview for the Bureau of European Policy Advisors in the European Commission. It identifies six societal challenges facing the EU in the 21st century: *economic growth, unemployment, climate change, ageing demographics, social exclusion, and public sector innovation*. Social innovations are seen as part of a novel innovation paradigm, which presents a contrast to the common understanding

⁵ <http://youngfoundation.org/wp-content/uploads/2012/10/Study-on-Social-Innovation-for-the-Bureau-of-European-Policy-Advisors-March-2010.pdf>

of innovations as ‘push’ models driven by R&D. The SoSI frames social innovations as an emerging and heterogeneous field of social change which to a large extent is still poorly understood. Like the OBSI, social innovations are defined as ‘innovations that are social both in their ends and in their means’ (SoSI, pp. 17).

Report: Empowering people, driving change

The Bureau of European Policy Advisors also published the report *Empowering people, driving change: Social innovation in the European Union*⁶ in 2010, which is strongly linked with the SoSI. It specifies the EU perspective on social innovations, which largely reflects that of the OBSI and SoSI: The societal challenges of migration, unemployment, poverty, aging and climate change are putting increasing stress on EU policy to find cost-effective solutions in times of budgetary constraints. The report briefly sums up these problems and premises:

‘Firstly, solutions must be found, in a time of major budgetary constraints, to deliver better services making more effective use of available resources. Second, the traditional ways in which the market, the public and the civil sector have provided answers to social demands are no longer sufficient. In this context, social innovation represents an important option, to be enhanced at different levels (local, regional, national, European) and sectors (public, private, civil) as its purpose is to innovate in a different way (through the active engagement of society itself) and to generate primarily social value.’ (ibid., p. 30).

Report: The European Commission Guide to Social Innovation

The most recent report is the *Guide to Social Innovation*⁷ published in 2013 by the European Commission DG Regional and Urban Policy and DG Employment, Social Affairs and Inclusion. The report basically takes up the topics of the three previously mentioned reports and provides examples of social innovation funded by EU Structural Funds (ESF and ERDF). It also aims at strengthening social innovation as a topic for the Structural Funds for the years 2014-2020.

Initiative: Social Innovation Europe

The *Social Innovation Europe* (SIE) initiative ran for two years from January 2011 until December 2012. It connected multiple actors including the Euclid Network, the Danish Technological Institute, and the Young Foundation. It was led by the Social Innovation eXchange and funded by the European Commission’s DG Enterprise and Industry. The SIE significantly draws on OBSI, which is evident from prominent citations of the OBSI on its website and the involvement of the Young Foundation in both the SIE and OBSI. If the OBSI was the kickoff, then the SIE ‘represents a major effort to build and streamline the social innovation field in Europe’⁸ by connecting the relevant actors through the initiative and ‘to create a streamlined, vigorous social innovation field in Europe, to raise a shared voice, and to propel Europe to lead the practice of social innovation globally.’⁹ The SIE’s activities include the publication of reports, launching an Internet presence (www.socialinnovationeurope.eu) and organising events. SIE reports such as *Strengthening Social Innovation in Europe. Journey to effective assessment and metrics* discuss the ways in which social innovations should be evaluated as effective instruments for social change. The four dimensions of

⁶ http://ec.europa.eu/bepa/pdf/publications_pdf/social_innovation.pdf

⁷ <http://s3platform.jrc.ec.europa.eu/documents/10157/47822/Guide%20to%20Social%20Innovation.pdf>

⁸ SIE report ‘Strengthening social innovation in Europe’, 2012, p. 6.

⁹ Ibid.

assessment are the *strategic fit*, the *impacts on outcome*, *efficiency*, and *potential for implementation* (p. 13). This again stresses a highly instrumental concept of social innovations, should they receive public funding. This instrumental perspective is also closely related to cost-cutting issues. Social innovations are increasingly discussed under the conditions of rising expenditures and strict financial limits. Another report, *Financing Social Impact. Funding social innovation in Europe – mapping the way forward* complements this view and reframes the basic problems already proposed in the OBSI:

‘But it [social innovation, C.S.] lacks the systematic and sophisticated infrastructures of support available to other fields – in particular, access to appropriate finance and funding. The result is that although there is no shortage of good ideas, far too few actually achieve the impact they could.’ (p. 6).

The final summary *Social Innovation Europe. January 2011 – December 2012* reiterated this point and stressed the need to connect the abundance of innovative activities at the communal level with higher-level political infrastructures and funding. This need for *Systemic Innovation* was also stressed in a third report, which centred on the shift from linear to networked modes of innovation and systems of innovation. Networked modes of innovation pose distinct problems to the governance of innovations and the systems approach situates each innovation in a rich institutional and cultural context. Both perspectives lead to the insight that ‘systemic innovation in general is difficult to orchestrate or support’ (p. 12).

The three SIE Reports *Financing Social Impact*, *Strengthening Social Innovation* and *Systemic Innovation*, together with the website www.socialinnovationeurope.eu and the SIE events resulted in ten recommendations which were submitted to the European Commission:

- 1) *Creating a common vision and better system* in order to align actors, interests and strategies by providing a shared definition of social innovations.
- 2) *Creating a shared intelligence* by standardising the understandings of social innovations and mapping the European social innovation efforts.
- 3) *Greater experimentation* triggered through the creation of opportunities and spaces for experimentation where innovation can also be systematically observed.
- 4) *Investing in research and innovation*, i.e. creating the relevant reflexive knowledge for establishing social innovations on a systemic level.
- 5) *Developing enabling conditions* through regulation, legislation and, especially, financing.
- 6) *Facilitating rapid learning* between the heterogeneous innovative agencies and policy makers, especially facilitating user-led modes of evaluation.
- 7) *Better metrics* for creating not only reflexive but systematic knowledge to provide policy makers with a reliable knowledge infrastructure.
- 8) *Stimulating/incentivising innovation* through challenges and prizes, results-based remuneration and focussing public procurement on social innovations.
- 9) *Incubation* of social innovations so that they can grow in size to match large-scale pressing social problems.
- 10) *Building capacities and supporting and growing networks*, especially initiatives like SIX and SIE enable local knowledge to be transferred and scaled to the European level and help to create the necessary common understanding of social innovations.

The ten recommendations highlight the perceived lack of reflexive knowledge and the underdeveloped references for social innovations from an EU perspective. The gap between local initiatives and EU agencies is mainly framed as an inability of large-scale politics to tap into the heterogeneous creative and innovative resources as well as an inability of local initiatives to tap into the grand EU funding schemes. The SIE suggests that metrics for

measurement and systematic, reflexive knowledge about social innovations, together with funding of social innovation networks and stimulating innovative activities themselves, will help to transfer successful local innovations to a larger European scale and, last not least, provide some solutions to pressing social problems, especially: climate change, chronic disease, social exclusion and material poverty. The SIE also proposes these problems as four major references for social innovations at the EU level.

Initiative: Challenge Social Innovation

So far, the discussion shows that there are many challenges to be overcome before social innovations may actually be implemented as solutions on a larger political scale. The conference *Challenge Social Innovation* (CSI, www.socialinnovation2011.eu) addressed this issue by pointing out that innovations in many societal fields and on many levels will become an important feature of concerted European action and EU policy. The conference focussed on the scientific analysis of social innovation with the intent to make existing social innovation research in the social sciences and the humanities more available to practitioners around the globe. Again, the need for the creation of reflexive knowledge was stated in the results of the conference, namely ‘to raise awareness of different approaches and of the need to foster common theoretical and methodological grounds for internationally comparable, reliable and applicable research in social innovation.’ The conference also produced the *Vienna Declaration* (VD), in which the most relevant topics in social innovation research were formulated. These topics are viewed to emerge out of the transition from industrial to knowledge- and service-based societies, which can no longer rely on technical innovation alone. As a solution, the declaration calls for a new innovation paradigm, which is ‘essentially characterised by the opening of the innovation process to society. Alongside companies, universities and research institutes, citizens and customers become relevant actors of innovation processes’ (VD, p. 2). In order to understand and utilise this new paradigm, the VD aims to strengthen and focus scientific research on social innovations in Europe by specifying scientific requirements and research topics as well as setting up concrete research collaborations. Thus, the reflexive knowledge concerning social innovations is predominantly formulated as scientific knowledge for the benefit of both practitioners and politicians. It should also be noted that the CSI conference as well as the VD are instruments for strengthening not only social innovations as such, but also to enhance social innovation research in the social sciences and humanities, for instance within the EU’s Seventh Framework Programme for Research, which strongly focuses on technical innovation.

Initiative: Theoretical, Empirical and Policy Foundations for Social Innovation in Europe

The *Theoretical, Empirical and Policy Foundations for Social Innovation in Europe* (TEPSIE, www.tepsie.eu) is such a programme funded through FP 7 under the topic ‘New innovation processes including Social Innovation’ which began in January 2012 and will continue for a period of three years. It is a scientific consortium aimed at preparing ‘the way for developing the tools, methods and policies which will be part of the EU strategy for social innovation’ (TEPSIE website).

Initiative: Employment and Social Innovation

Social innovations are now also increasingly integrated into EU funding schemes. For instance, the EU programme for *Employment and Social Innovation* (EaSI)¹⁰ holds a proposed budget of €815 million for the years 2014 to 2020. It is aimed at integrating and extending the coverage of three existing programmes: PROGRESS (Programme for Employment and Social Solidarity), EURES (European Employment Services) and the European Progress Microfinance Facility. According to the press release ‘EaSI will enable the Commission to increase policy coherence and impact of its instruments, which have common objectives, thus contributing to the Europe 2020 Strategy for Jobs and Growth’. Thus, EaSI will become a central programme within the EU Initiative for Employment and Social Inclusion running from 2014 to 2020.

Competition: This is European Social Innovation

Early social innovation initiatives often take the form of competitions. In 2010, *This is European Social Innovation* was aimed at accessing and evaluating social innovation projects from all over Europe. Out of more than one hundred proposals, ten were chosen according to three criteria: usefulness, meaning for those involved and creating new and effective relationships in society.

Competition: International Social Innovation Competition: Naples 2.0

A second practical step towards fusing social innovations and EU policy was taken in a model competition geared towards various social challenges in the city of Naples in 2011¹¹. It was organised by the Euclid Network around six pre-defined challenges: 1) turning a confiscated Camorra villa into a social enterprise, 2) making the abandoned Roman bath of Fuorigrotta accessible, 3) designing a new business model for the volunteering organisation Gioco Immagine e Parole, 4) designing a new business model for Maestri Di Strada which re-integrates school drop-outs, 5) developing a new method to integrate the Roma community of Scampia and 6) developing an effective methodology for recycling textile (this challenge had no winner). In contrast to the *This is European Social Innovation* competition, the awards were granted not to successfully functioning projects, but to promising candidates who had developed proposals for pressing and pre-defined societal challenges in order to evaluate how social innovations can be directed at specific social problems.

Competition: European Social Innovation Competition

In 2012, a third competition was set up for novel ways of dealing with work opportunities (www.socialinnovationcompetition.eu). In May 2013, €20,000 grants were awarded to three proposals: the first proposed specific measures to extend the reach and impact of sustainable, small-scale social care and health services; the second, improvements in job market access for the economically deprived by making their skills widely visible; and the third, reductions in youth unemployment achieved through job sharing among younger and older employees. The next round of the competition is scheduled for 2014.

¹⁰ http://europa.eu/rapid/press-release_MEMO-13-628_en.htm

¹¹ <http://www.euclidnetwork.eu/projects/current-projects/european-social-innovation-naples-20.html>

Agencies and institutions

In addition to the initiatives and competitions, a number of dedicated social innovation agencies are actively advancing this topic.¹² The London-based *Young Foundation* (YF, youngfoundation.org), for instance, initiated the now independent *Social Innovation eXchange* (SIX, www.socialinnovationexchange.org). The Foundation is also currently involved in TEPSIE; its past activities include involvement in the SIE, as well as content-related work on the OBSI and SoSI. The Young Foundation is an influential intermediary in the process of putting social innovation on the political agenda, i.e. in politically innovating the idea of social innovation itself. On the continent, the *Centre for Social Innovation* (ZSI, www.zsi.at) in Vienna co-organised the CSI and is part of the European School of Social Innovation. Many more such intermediary agencies exist but will not be listed here. The main point about these social innovation agencies is that they are, like the YF, reflexive agents for not only promoting social innovations at the grassroots level, but also for politically promoting the concept of social innovation as both a solution and a challenge for European policy in the 21st century. They also aim to provide a reflexive knowledge base and a suitable valuation metric for identifying promising social innovation projects and the mechanisms for growing them from their local contexts to larger scales, quintessentially connecting practitioners with researchers and politicians, i.e. local ideas with systematic knowledge and potent funding.

This reflexive creation of social innovation as a central topic for European societies and European policy is of course in itself an interesting case of social innovation. The current status of social innovations for EU policy makers is still that of somewhat ‘hopeful monsters’ in evolutionary terms, i.e. ‘monsters which would start a new evolutionary line if fitting into some empty environmental niche.’ (Goldschmidt 1933: 547). The empty environmental niche for social innovations is seen to open up through the shift from industrial societies relying on techno-economic innovations to knowledge or service-oriented societies, which increasingly rely on more open and complex models of innovation for growth as well as cost containment. This niche also emerges through a growing awareness of the failings of the state and the market to address post-industrial challenges. Social innovations themselves have been around for much longer, but now seems the time to reflexively build on this niche and provide for the growth of concept of social innovations. Because social innovations are simultaneously viewed as ‘hopeful’ and ‘monstrous’, intermediary agencies like the YF supply a dual legitimisation, for instance in the TEPSI definition of social innovations (Young Foundation 2012). On the one hand, social innovations hold clearly hopeful promise:

‘Social innovation has also emerged as a response to growing social, environmental and demographic challenges – often called ‘wicked’ problems because they are complex, multi-faceted, involve a range of stakeholders and are, by their nature, impossible to solve. These challenges are numerous but include, the ‘failure’ of the modern welfare state, the failure of conventional market capitalism, resource scarcity and climate change, an ageing population and the associated care and health costs, the impact of globalisation, the impact of mass urbanisation and so on.’ (ibid., p. 5)

On the other hand, they are ‘monstrous’ due to their lack of overall cohesion and systematic knowledge:

‘The boundaries around social innovation boundaries are so vague and ill defined that it is probably more appropriate to talk of social innovation ‘literatures’ than one distinct and unified body of knowledge.’ (ibid., p. 4)

In order to create a new evolutionary line, i.e. the transformation of social innovation into a new paradigm for large-scale EU funding, the monstrosity of social innovation needs to be addressed and ameliorated in two ways: First, innovations must be more scalable in order to

¹² A European directory can be found here: <https://webgate.ec.europa.eu/socialinnovationeurope/directory>

achieve a broader impact and, second, a more systematic and reflexive knowledge base is required. Agencies like YF serve as locales for channelling both the hopefulness as well as the monstrosity of social innovations and as such they become important agencies in civil society, academic discourse and political decision-making processes.

The EU social innovation initiatives, competitions and reports discussed above clearly show the increasingly reflexive manner of engaging with social innovations. If we distinguish between the pragmatic, the grammatical and the semantic levels of social innovations (Hutter et al. 2011), we can also see differences between them. On the pragmatic level, the level of concrete social innovation activities, an abundance of social innovations can be identified throughout Europe and in several different fields. Reports like the OBSI and SoSI, as well as initiatives like SIE or CSI, emphasise the richness of the pragmatic level and, at the same time, contribute to an increased prominence on the semantic level. In contrast, what seems to be most obviously lacking on the EU scale is the grammatical level of systematic organisation and funding for social innovations. The reports and initiatives unanimously state that while the grammar of economic and technical innovations is rather well researched and understood, knowledge about the grammar of social innovations is still sorely lagging. Initial steps can be undertaken in this direction by collaborating to develop a shared understanding of social innovations based on a distinct set of references, for instance: *novelty*, *effectiveness*, *sustainability*, and the *satisfaction of social needs* as well as the *empowerment of beneficiaries* (Young Foundation 2012, pp. 18). Whereas the first three characteristics can also be used to describe a narrow definition of techno-economic innovations, the latter specify distinct references of social innovations.

7. Conclusion

This paper did not endeavour to provide a comprehensive overview of the literature and phenomenon of social innovation (see Howaldt/Jacobsen 2010 for a broader discussion). Instead, its aim was to relate concepts and ideas related to social innovation to questions of an emerging ‘innovation society’ (Hutter et al. 2011), i.e. a society where innovation has become a dominant and pervasive phenomenon. The argument was elaborated in three steps. First, the term social innovation was distinguished from a narrow notion of techno/economic innovation (section 2) and a broad understanding of social change (section 3). The second step consisted of relating the concept of social innovation to questions of an increased reflexivity (section 4) and multiple references (chapter 5) of social innovations against the backdrop of an innovation society. The third and final step followed recent activities concerning social innovations on an EU scale (section 6) and related them to the previously discussed questions of increasing reflexivity and multi-referentiality.

The reflexivities of social innovations were subdivided into *fundamental reflexivity*, *reflexivity of social order* and *reflexivity of consequences*. We can see that reflexivity of social order plays an important role with respect to social innovation activities in the EU. The failure of traditional state and market structures created an increased reflexive awareness of their inability to provide adequate solutions for current societal problems. Thus, the established social order of industrial societies gave way to novel societal forms such as knowledge or service-oriented societies. The idea of an innovation society results from the reflexive monitoring of this shift and proposes a novel (social) innovation paradigm which better fits growing demands for more effective social change and improved cost containment. Essentially, the reflexive monitoring of social order in an innovation society is not predominantly oriented towards stability, but towards change and the scaling up of local solutions to regional, national or even international levels, i.e. the diffusion of innovations.

Academic research is of course a dominant source of such reflexive knowledge and the innovation-oriented EU social research programmes further the expertise on changing social problems and a fragile social order. Social innovations have clearly increased on the level of reflexive social order. This increase concerns at least three different aspects: first, an increase in concrete social innovation activities; second, an increase in systematic knowledge about social innovations; and third, a shift in governance and funding structures promoting social innovations.

So far, it seems too early to comment on the reflexivity of consequences concerning social innovations. If we follow the arguments made within the EU initiatives, control structures still need to be built around social innovations before they can (even start to) get 'out-of-control'. Put differently, social innovations are still too ineffective on the EU level so as to warrant assumptions about the reflexivity of their consequences. The questions which needs to be answered is whether social innovations actually contribute to an out-of-control 'juggernaut' (Giddens 1990, p. 139) of modernity or if they are at least partial solutions for regaining the reigns. The former would be the case if the heterogeneity and local specifics of social innovations would result in further societal complexity and promote fragmentation over integration. The latter might be achieved if social innovations provide the means for controlling and directing social change, as well as solving pressing problems. Like all innovations, social innovations are 'hopeful monsters' to begin with, and only their development and their consequences determine how they will be evaluated.

The multiple references of social innovations pose further difficulties when it comes to their evaluation. Conceiving social innovations as *Ogburn-type innovations* which decrease the tensions between differentiated yet misaligned social spheres associates less strongly with growth, i.e. the main reference of *Schumpeter-type innovations*. However, it does emphasise how they might balance divergent social interests. Especially when social innovations are targeted at specific societal challenges, they predominantly become a means of repair: they are supposed to close a gap created by technical or economic innovation and the ensuing cultural lag. When societies move from the industrial innovation paradigm which Ogburn had in mind toward a more pervasive innovation paradigm which permeates nearly all societal fields, we could assume an increase in lags through an increase in innovations. The reflexive consequences of such a shift, again, have not yet developed and thus are difficult to estimate. Here it can only be emphasised that innovations not only refer to invention and creative destruction, but also to the durable stabilisation of novel arrangements.

Even if we cannot predict the impact and consequences of increasingly reflexive social innovations, we can analyse their increasing reflexivity in terms of changing means-ends relations. As means of social change, social innovations make specific societal futures more probable than others and, in this way, shape the ends to which they are employed. Such a performative agency could be of greater significance than the direct or indirect consequences of specific social innovations. The study of social innovations is always a study of change and contestation, in which means and ends are critically valued by interested parties. And even if social innovations cannot deliver the promises which are attached to them, we can see them as important new locales for the negotiation and enforcements of different social interests. Thus, they become relevant and competitive sites of social inclusion and exclusion within an emerging innovation society.

References

- Beck, Ulrich; Bonss, Wolfgang; Lau, Christoph (2003): The Theory of Reflexive Modernization. Problematic, Hypotheses and Research Programme. In: *Theory, Culture & Society*, 20 (2): 1-33.
- Beck, Ulrich; Giddens, Anthony; Lash, Scott (1994): *Reflexive modernization. Politics, tradition and aesthetics in the modern social order*. Stanford, Stanford University Press.
- Beckert, Jens; Aspers, Patrik (ed.) (2011): *The worth of goods. Valuation and pricing in the economy*. Oxford, Oxford University Press.
- Boltanski, Luc; Thévenot, Laurent (2006) [1991]: *On justification. Economies of worth*. Princeton, Princeton University Press.
- Brooks, Harvey (1982): Social and technological innovation. In: Lundstedt, Sven B.; Colglazier Jr., E. William (ed.): *Managing innovation. The social dimension of creativity, invention, and technology*. New York, Pergamon Press: 1-30.
- Callon, Michel (1998): Introduction The embeddedness of economic markets in economics. In: Callon, Michel (ed.): *The laws of the market*. Oxford, Blackwell: 1-57.
- Dewey, John (1929) [1925]: *Experience and nature*. London, Allen & Unwin.
- (1929): *The quest for certainty. A study of the relation of knowledge and action*. New York, Minton, Balch.
- (1939): Theory of valuation. In: *International Encyclopedia of Unified Science*, 2 (4): 1-67.
- Fairweather, George W. (1972): *Social change. The challenge to survival*. Morristown, General Learning Press.
- Gershuny, Jonathan (1983): *Social innovation and the division of labour*. Oxford, Oxford University Press.
- Giddens, Anthony (1984): *The constitution of society. Outline of the theory of structuration*. Berkeley, University of California Press.
- (1990): *The consequences of modernity*. Cambridge, Polity Press.
- Gillwald, Katrin (2000): *Konzepte sozialer Innovation*. Berlin, WZB Paper: Querschnittsgruppe Arbeit und Ökologie, P00-519.
- Godin, Benoît (2008): *Innovation. The history of a category*. Project on the Intellectual History of Innovation Working Paper No. 1. Montreal, Project on the Intellectual History of Innovation.
- (2010): Innovation without the word. William F. Ogburn's contribution to the study of technological innovation. In: *Minerva*, 48 (3): 277-307.
- Goldschmidt, Richard (1933): Some aspects of evolution. In: *Science*, 78 (2033): 539-547.
- Howaldt, Jürgen; Jacobsen, Heike (ed.) (2010): *Soziale Innovation. Auf dem Weg zu einem postindustriellen Innovationsparadigma*. Wiesbaden, VS Verlag.

- Howaldt, Jürgen; Schwarz, Michael (2010): Soziale Innovation – Konzepte, Forschungsfelder und -perspektiven. In: Howaldt, Jürgen; Jacobsen, Heike (ed.): Soziale Innovation. Auf dem Weg zu einem postindustriellen Innovationsparadigma. Wiesbaden, VS Verlag: 87-108.
- Hughes, Everett C. (1936): The ecological aspect of institutions. In: *American Sociological Review*, 1 (2): 180-189.
- Hughes, Thomas P. (1986): The seamless web. Technology, science, etcetera, etcetera. In: *Social Studies of Science*, 16 (2): 281-292.
- Hutter, Michael; Knoblauch, Hubert; Rammert, Werner; Windeler, Arnold (2011): Innovation society today. The reflexive creation of novelty. Berlin, Technical University, Technology Studies Working Papers, TUTS-WP-4-2011.
- Kemp, René; Rip, Arie; Schot, Johan (2001): Constructing transition paths through the management of niches. In: Garud, Raghu; Karnøe, Peter (ed.): *Path Dependence and Creation*. Mahwah, Lawrence Erlbaum: 269-299.
- Kjellberg, Hans; Mallard, Alexandre (2013): Valuation Studies? Our Collective Two Cents. In: *Valuation Studies*, 1 (1): 11-30.
- Lash, Scott (2003): Reflexivity as Non-Linearity. In: *Theory, Culture & Society*, 20 (2): 49-57.
- Latour, Bruno (1986): The powers of association. In: Law, John (ed.): *Power, action and belief: A new sociology of knowledge?* London, Routledge: 264-280.
- (2002): Morality and technology. The end of the means. In: *Theory, Culture & Society*, 19 (5/6): 247-260.
- (2003): Is Re-modernization Occurring - And If So, How to Prove It? A Commentary on Ulrich Beck. In: *Theory, Culture & Society*, 20 (2): 35-48.
- Law, John; Hassard, John (ed.) (1999): *Actor network theory and after*. Oxford, Blackwell.
- Lynch, Michael (2000): Against Reflexivity as an Academic Virtue and Source of Privileged Knowledge. In: *Theory, Culture & Society*, 17 (3): 26-54.
- MacCallum, Diana; Moulaert, Frank; Hillier, Jean; Haddock, Serena Vicari (ed.) (2009): *Social innovation and territorial development*. Farnham, Ashgate.
- MacKenzie, Donald (2006): *An engine, not a camera. How financial models shape markets*. Cambridge, MIT Press.
- Mead, George H. (1932): *The philosophy of the present*. London, Open Court.
- (1936): *Movements of thought in the nineteenth century*. Chicago, University of Chicago Press.
- Merton, Robert K. (1936): The unanticipated consequences of purposive social action. In: *American Sociological Review*, 1 (6): 894-904.
- Meyer, John W.; Rowan, Brian (1977): Institutionalized organizations. Formal structure as myth and ceremony. In: *American Journal of Sociology*, 83 (2): 340-363.

- Moore, Wilbert E. (1960): A reconsideration of theories of social change. In: *American Sociological Review*, 25 (6): 810-818.
- Mulgan, Geoff (2006): The process of social innovation. In: *Innovations: Technology, Governance, Globalization*, 1 (2): 145-162.
- Mulgan, Geoff; Tucker, Simon; Ali, Rushanara; Sanders, Ben (2007): *Social Innovation. What it is, why it matters and how it can be accelerated*. Skoll Centre for Social Entrepreneurship Working Paper. Saïd Business School, Oxford.
- Mumford, Michael D. (2002): Social innovation. Ten cases from Benjamin Franklin. In: *Creativity Research Journal*, 14 (2): 253-266.
- Murray, Robin; Caulier-Grice, Julie; Mulgan, Geoff (2010): *The open book on social innovation*. The Young Foundation / NETSA.
- Nicholls, Alex; Murdock, Alex (ed.) (2012): *Social innovation. Blurring boundaries to reconfigure markets*. London, Palgrave Macmillan.
- Nowotny, Helga (2005): *Unersättliche Neugier. Innovation einer fragilen Zukunft*. Berlin, Kadmos.
- Ogburn, William F. (1922): *Social change. With respect to culture and original nature*. New York, Viking Press.
- (1964): *On culture and social change*. Chicago, University of Chicago Press.
- Phills Jr., James A.; Deiglmeier, Kriss; Miller, Dale T. (2008): *Rediscovering social innovation*. Stanford, *Stanford Social Innovation Review*, Fall 2008.
- Popper, Karl (1945): *The open society and its enemies. Volume I: Plato*. London, Routledge.
- Preskill, Hallie; Beer, Tanya (2012): *Evaluating Social Innovation*. FSG Report. Center for Evaluation Innovation.
- Rammert, Werner (2008): *Technik und Innovation*. In: Maurer, Andrea (ed.): *Handbuch Wirtschaftssoziologie*. Wiesbaden, VS Verlag: 291-319.
- (2010): *Die Innovationen der Gesellschaft*. In: Howaldt, Jürgen; Jacobsen, Heike (ed.): *Soziale Innovation. Auf dem Weg zu einem postindustriellen Innovationsparadigma*. Wiesbaden, VS Verlag: 21-52.
- (2012): *Distributed agency and advanced technology. Or: How to analyze constellations of collective inter-agency*. In: Passoth, Jan-Hendrik; Peuker, Birgit; Schillmeier, Michael (ed.): *Agency without actors? New approaches to collective action*. London, Routledge: 89-112.
- Reckwitz, Andreas (2002): *Toward a theory of social practices. A development in culturalist theorizing*. In: *European Journal of Social Theory*, 5 (2): 245- 265.
- Rosenbloom, Richard S. (ed.) (1969): *Social innovation in the city. New enterprises for community development*. Cambridge, Harvard University Press.
- Schumpeter, Joseph (1942): *Capitalism, socialism and democracy*. New York, Harper & Row.

- Schumpeter, Joseph A. (1939): *Business cycles. A theoretical, historical, and statistical analysis of the capitalist process.* New York, McGraw-Hill.
- Stark, David (2009): *The sense of dissonance. Accounts of worth in economic life.* Princeton, Princeton University Press.
- Taylor, James B. (1970): *Introducing social innovation.* In: *The Journal of Applied Behavioral Science*, 6 (1): 69-77.
- Veblen, Thorstein B. (2006) [1921]: *The engineers and the price system.* New York, Cosimo.
- Whyte, William F. (1982): *Social inventions for solving human problems.* In: *American Sociological Review*, 47 (1): 1-13.
- Winner, Langdon (1977): *Autonomous technology. Technics-out-of-control as a theme in political thought.* Cambridge, MIT Press.
- (1980): *Do artifacts have politics?* In: *Daedalus*, 109 (1): 121-136.
- Young Foundation (2012): *Social Innovation Overview.* A deliverable of the project “The theoretical, empirical and policy foundations for building social innovation in Europe” (TEPSIE), European Commission – 7th Framework Programme. Brussels, European Commission, DG Research.
- Zapf, Wolfgang (1989): *Über soziale Innovationen.* In: *Soziale Welt*, 40 (1-2): 170-183.

In der Reihe „Working Papers“ sind bisher erschienen:

01/2014	Werner Rammert	Unsicherheit trotz Sicherheitstechnik? Das Kreuz mit den komplexen Konstellationen TUTS-WP-1-2014
05/2013	Michael Hutter Hubert Knoblauch Werner Rammert Arnold Windeler	Innovation Society Today: The Reflexive Creation of Novelty TUTS-WP-5-2013
04/2013	Valentin Janda	Werner Rammert – wider soziale und technische Reduktionen TUTS-WP-4-2013
03/2013	Jörg Potthast	Technik als Experiment, Technikforschung als Kritik? Eine Zwischenbilanz TUTS-WP-3-2013
02/2013	Katharina Oehme	Rahmen und Routinen der Techniknutzung. Was Kann man aus Experimenten über alltägliche Techniknutzung lernen? TUTS-WP-2-2013
01/2013	Werner Rammert	Vielfalt der Innovation und gesellschaftlicher Zusammenhalt Von der ökonomischen zur gesellschaftstheoretischen Perspektive TUTS-WP-1-2013
05/2012	Valentin Janda	Usability-Experimente: Das konstruktive Experiment einer soziologischen Analyse TUTS-WP-5-2012
04/2012	Jörg Potthast	Politische Soziologie technischer Prüfungen. Das Beispiel Straßenverkehrssicherheit TUTS-WP-4-2012
03/2012	Christina Besio Robert J. Schmidt	Innovationen als spezifische Form sozialer Evolution: Ein systemtheoretischer Entwurf TUTS-WP-3-2012
02/2012	Julian Stubbe Mandy Töppel (Hrsg.)	Muster und Verläufe der Mensch-Technik-Interaktivität Band zum gleichnamigen Workshop am 17./18. Juni 2011 in Berlin TUTS-WP-2-2012
01/2012	Jochen Gläser	How does Governance change research content? On the possibility of a sociological middle-range theory linking science policy studies to the sociology of scientific knowledge* TUTS-WP-1-2012
06/2011	Anna Henkel	Die Dinge der Gesellschaft Erste Überlegungen zu einer Gesellschaftstheorie der Dinglichkeit TUTS-WP-6-2011

05/2011	Jörg Potthast	Soziologie der Kritik und Technik im Alltag TUTS-WP-5-2011
04/2011	Michael Hutter Hubert Knoblauch Werner Rammert Arnold Windeler	Innovationsgesellschaft heute: Die reflexive Herstellung des Neuen TUTS-WP-4-2011
03/2011	Werner Rammert	Distributed Agency and Advanced Technology Or: How to Analyse Constellations of Collective Inter-Agency TUTS-WP-3-2011
02/2011	Jessica Stock	Eine Maschine wird Mensch? Von der Notwendigkeit, Technik als integralen Bestandteil sozialer Praktiken zu akzeptieren – Ein Theorie-Report. TUTS-WP-2-2011
01/2011	Jörg Potthast	Wetterkarten, Netzwerkdiagramme und Stammbäume: Innovationskulturanalyse in Kalifornien. TUTS-WP-1-2011
03/2010	Michael Hahne	Aktivitätstheorie. Vorstellung zentraler Konzepte und Einordnung in die perspektivistische Theorievorstellung. TUTS-WP-3-2010
02/2010	Werner Rammert	Die Innovationen der Gesellschaft TUTS-WP-2-2010
01/2010	Jörg Potthast	Following passengers/locating access On recent attempts to disrupt terrorist travel (by air) TUTS-WP-1-2010
02/2009	Cornelius Schubert	Medizinisches Körperwissen als zirkulierende Referenzen zwischen Körper und Technik TUTS-WP-2-2009
01/2009	Werner Rammert	Die Pragmatik des technischen Wissens oder: „How to do Words with things“ TUTS-WP-1-2009
05/2008	Michael Hahne Corinna Jung	Über die Entstehungsbedingungen von technisch unterstützten Gemeinschaften TUTS-WP-5-2008
04/2008	Werner Rammert	Where the action is: Distributed agency between humans, machines, and programs TUTS-WP-4-2008
03/2008	Ingo Schulz-Schaeffer	Technik als Gegenstand der Soziologie TUTS-WP-3-2008
02/2008	Holger Braun-Thürmann	Die Ökonomie der Wissenschaften und ihre Spin-offs TUTS-WP-2-2008

01/2008	Werner Rammert	Technik und Innovation TUTS-WP-1-2008
08/2007	Jörg Potthast	Die Bodenhaftung der Flugsicherung TUTS-WP-8-2007
07/2007	Kirstin Lenzen	Die innovationsbiographische Rekonstruktion technischer Identitäten am Beispiel der Augmented Reality-Technologie. TUTS-WP-7-2007
06/2007	Michael Hahne Martin Meister Renate Lieb Peter Biniok	Sequenzen-Routinen-Positionen – Von der Interaktion zur Struktur. Anlage und Ergebnisse des zweiten Interaktivitätsexperimentes des INKA-Projektes. TUTS-WP-6-2007
05/2007	Nico Lüdtke	Lässt sich das Problem der Intersubjektivität mit Mead lösen? – Zu aktuellen Fragen der Sozialtheorie TUTS-WP-5-2007
04/2007	Werner Rammert	Die Techniken der Gesellschaft: in Aktion, in Interaktivität und hybriden Konstellationen. TUTS-WP-4-2007
03/2007	Ingo Schulz-Schaeffer	Technik als sozialer Akteur und als soziale Institution. Sozialität von Technik statt Postsozialität TUTS-WP-3-2007
02/2007	Cornelius Schubert	Technology Roadmapping in der Halbleiterindustrie TUTS-WP-2-2007 1/2007 Werner Rammert
01/2007	Werner Rammert	Technografie trifft Theorie: Forschungsperspektiven einer Soziologie der Technik TUTS-WP-1-2007
04/2006	Esther Ruiz Ben	Timing Expertise in Software Development Environments TUTS-WP-4-2006
03/2006	Werner Rammert	Technik, Handeln und Sozialstruktur: Eine Einführung in die Soziologie der Technik TUTS-WP-3-2006
02/2006	Alexander Peine	Technological Paradigms Revisited – How They Contribute to the Understanding of Open Systems of Technology TUTS-WP-2-2006
01/2006	Michael Hahne	Identität durch Technik: Wie soziale Identität und Gruppenidentität im sozio-technischen Ensemble von Ego-Shooterclans entstehen TUTS-WP-1-2006
07/2005	Peter Biniok	Kooperationsnetz Nanotechnologie – Verkörperung eines neuen Innovationsregimes? TUTS-WP-7-2005

06/2005	Uli Meyer Cornelius Schubert	Die Konstitution technologischer Pfade. Überlegungen jenseits der Dichotomie von Pfadabhängigkeit und Pfadkreation TUTS-WP-6-2005
05/2005	Gesa Lindemann	Beobachtung der Hirnforschung TUTS-WP-5-2005
04/2005	Gesa Lindemann	Verstehen und Erklären bei Helmuth Plessner TUTS-WP-4-2005
03/2005	Daniela Manger	Entstehung und Funktionsweise eines regionalen Innovationsnetzwerks – Eine Fallstudienanalyse TUTS-WP-3-2005
02/2005	Estrid Sørensen	Fluid design as technology in practice – Spatial description of online 3D virtual environment in primary school Bestell-Nr. TUTS-WP-2-2005
01/2005	Uli Meyer Ingo Schulz-Schaeffer	Drei Formen interpretativer Flexibilität TUTS-WP-1-2005
03/2004	Werner Rammert	Two Styles of Knowing and Knowledge Regimes: Between ‘Explicitation’ and ‘Exploration’ under Conditions of ‘Functional Specialization’ or ‘Fragmental Distribution’ TUTS-WP-3-2004
02/2004	Jörg Sydow Arnold Windeler Guido Möllering	Path-Creating Networks in the Field of Text Generation Lithography: Outline of a Research Project TUTS-WP-2-2004
01/2004	Corinna Jung	Die Erweiterung der Mensch-Prothesen-Konstellation. Eine technografische Analyse zur ‚intelligenten‘ Beinprothese TUTS-WP-1-2004
10/2003	Cornelius Schubert	Patient safety and the practice of anaesthesia: how hybrid networks of cooperation live and breathe TUTS-WP-10-2003
09/2003	Holger Braun-Thürmann Christin Leube Katharina Fichtenau Steffen Motzkus Saskia Wessälly	Wissen in (Inter-)Aktion - eine technografische Studie TUTS-WP-9-2003
08/2003	Eric Lettkemann Martin Meister	Vom Flugabwehrgeschütz zum niedlichen Roboter. Zum Wandel des Kooperation stiftenden Universalismus der Kybernetik TUTS-WP-8-2003
07/2003	Klaus Scheuermann Renate Gerstl	Das Zusammenspiel von Multiagentensystem und Mensch bei der Terminkoordination im Krankenhaus: Ergebnisse der Simulationsstudie ChariTime TUTS-WP-7-2003

06/2003	Martin Meister Diemo Urbig Kay Schröter Renate Gerstl	Agents Enacting Social Roles. Balancing Formal Structure and Practical Rationality in MAS Design TUTS-WP-6-2003
05/2003	Roger Häußling	Perspektiven und Grenzen der empirischen Netzwerkanalyse für die Innovationsforschung am Fallbeispiel der Konsumgüterindustrie TUTS-WP-5-2003
04/2003	Werner Rammert	Die Zukunft der künstlichen Intelligenz: verkörpert – verteilt – hybrid TUTS-WP-4-2003
03/2003	Regula Burri	Digitalisieren, disziplinieren. Soziotechnische Anatomie und die Konstitution des Körpers in medizinischen Bildgebungsverfahren TUTS-WP-3-2003
02/2003	Werner Rammert	Technik in Aktion: Verteiltes Handeln in soziotechnischen Konstellationen TUTS-WP-2-2003
01/2003	Renate Gerstl Alexander Hanft Sebastian Müller Michael Hahne Martin Meister Dagmar Monett Diaz	Modellierung der praktischen Rolle in Verhandlungen mit einem erweiterten Verfahren des fallbasierten Schließens TUTS-WP-1-2003
09/2002	Werner Rammert	Gestörter Blickwechsel durch Videoüberwachung? Ambivalenzen und Asymmetrien soziotechnischer Beobachtungsordnungen TUTS-WP-9-2002
08/2002	Werner Rammert	Zwei Paradoxien einer Wissenspolitik: Die Verknüpfung heterogenen und die Verwertung impliziten Wissens TUTS-WP-8-2002
06/2002	Martin Meister Diemo Urbig Renate Gerstl Eric Lettkemann Alexander Ostherenko Kay Schröter	Die Modellierung praktischer Rollen für Verhandlungssysteme in Organisationen. Wie die Komplexität von Multiagentensystemen durch Rollenkonzeptionen erhöht werden kann TUTS-WP-6-2002
05/2002	Cornelius Schubert	Making interaction and interactivity visible. On the practical and analytical uses of audiovisual recordings in high-tech and high-risk work situations TUTS-WP-5-2002
04/2002	Werner Rammert Ingo Schulz-Schaeffer	Technik und Handeln - Wenn soziales Handeln sich auf menschliches Verhalten und technische Artefakte verteilt. TUTS-WP-4-2002

03/2002	Werner Rammert	Technik als verteilte Aktion. Wie technisches Wirken als Agentur in hybriden Aktionszusammenhängen gedeutet werden kann. TUTS-WP-3-2002
02/2002	Werner Rammert	Die technische Konstruktion als Teil der gesellschaftlichen Konstruktion der Wirklichkeit TUTS-WP-2-2002
01/2002	Werner Rammert	The Governance of Knowledge Limited: The rising relevance of non-explicit knowledge under a new regime of distributed knowledge production TUTS-WP-1-2002
02/2001	Ingo Schulz-Schaeffer	Technikbezogene Konzeptübertragungen und das Problem der Problemähnlichkeit. Der Rekurs der Multiagentensystem-Forschung auf Mechanismen sozialer Koordination TUTS-WP-2-2001
01/2001	Werner Rammert	The Cultural Shaping of Technologies and the Politics of Technodiversity TUTS-WP-1-2001
10/2000	Frank Janning Klaus Scheuermann Cornelius Schubert	Multiagentensysteme im Krankenhaus. Sozionische Gestaltung hybrider Zusammenhänge TUTS-WP-10-2000
09/2000	Holger Braun	Formen und Verfahren der Interaktivität – Soziologische Analysen einer Technik im Entwicklungsstadium. TUTS-WP-9-2000
08/2000	Werner Rammert	Nichtexplizites Wissen in Soziologie und Sozionik. Ein kursorischer Überblick TUTS-WP-8-2000
07/2000	Werner Rammert	Ritardando and Accelerando in Reflexive Innovation, or How Networks Synchronise the Tempi of Technological Innovation TUTS-WP-7-2000
05/2000	Jerold Hage Roger Hollingsworth Werner Rammert	A Strategy for Analysis of Idea Innovation, Networks and Institutions National Systems of Innovation, Idea Innovation Networks, and Comparative Innovation Biographies TUTS-WP-5-2000
04/2000	Holger Braun	Soziologie der Hybriden. Über die Handlungsfähigkeit von technischen Agenten TUTS-WP-4-2000
03/2000	Ingo Schulz-Schaeffer	Enrolling Software Agents in Human Organizations. The Exploration of Hybrid Organizations within the Socionics Research Program TUTS-WP-3-2000

02/2000	Klaus Scheuermann	Menschliche und technische ‚Agency‘: Soziologische Einschätzungen der Möglichkeiten und Grenzen künstlicher Intelligenz im Bereich der Multiagentensysteme TUTS-WP-2-2000
01/2000	Hans-Dieter Burkhard Werner Rammert	Integration kooperationsfähiger Agenten in komplexen Organisationen. Möglichkeiten und Grenzen der Gestaltung hybrider offener Systeme TUTS-WP-1-2000
01/1999	Werner Rammert	Technik Stichwort für eine Enzyklopädie TUTS-WP-1-1999