

The Society of Knowledge: Tendency and Perspectives¹

By Josef Hochgerner

There have always been innovations – even before there was a concept for them and long before their increasing prominence in recent decades. However, history does not lessen the significance of current innovations, emerging from research and receiving financial support, in safeguarding and improving human living conditions. After all, space, time, stardust, and biological cells existed before humans perceived them, made them into concepts, and began to understand and utilize their qualities and their effects. The concept of innovation, in terms of implementation and dissemination of new products and processes, was developed in the 20th century and first described by Joseph Schumpeter in 1911 with features still acknowledged today. It attracted attention and significance over the course of decades, initially in economic theory. Towards the end of the 20th century, innovation became a salient objective in general corporate practice, guiding research and economic policy in industrially developed countries. The focus on economy and technology remained characteristic: Indicators and statistics on innovations, their forms, prevalence, and differences between countries or regions, have until now been based only on survey within the general population of enterprises.

The concept of innovation in an economically dominated society

Innovations are embedded in basic cultural patterns and processes of social change, and depend on historical, regional, and political conditions. The phenomena, functions and effects, as well as opportunities and speed of dissemination of concrete innovations, are based on and affected by these variables. The social relevance of innovations can be thoroughly ambivalent: Innovations can affirm, support, and accelerate existing social conditions and trends, or can oppose these developments and change the “normal” course of events. Although innovations are based on intentions and, by definition, unfold potential for change, their chances of success and proliferation differ according to whether the intentions and effects of an innovation comply with or run contrary to the basic patterns of a society. The effort necessary to assert the new against the old, or to make an idea or an invention successful in society or on the market, is less for innovations that provide improvements in conformity with existing expectations. Innovations that aim not at improving/perfecting, but at changing/altering the status quo may expect and need to overcome greater obstacles.

Just as technology is to a certain extent socially constructed, innovations also develop under concrete cultural conditions. In the present with its global and defining “Western industrialized” world economy, the *economy dominates the foreground of society*. More than 200 years of industrial development and the global assertion of the capitalist value system have led to an economic model with global interdependencies, but lacking adequate institutions and structures of a world society with shared interests and standards to end poverty and dependence by steering and utilizing in targeted ways the enormous economic productivity. Schumpeter’s Austro-Hungarian compatriot and contemporary, Karl Polanyi, perceived that the modern changes in “Economy and Society” (also the title of Max Weber’s main work of 1922) had led to a separation of economic processes from society. In the course of this ‘great transformation’,

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different rationales of development and action emerged, making society dependent on a special type of economy – seen increasingly as something ‘external’ and socially uncontrollable.

Accordingly, capitalism in the ‘system of the market economy’, unlike earlier market forms², became a specific institution of enormous significance for the overall structure of society: It means the treatment of *society as an appendix to the market*. The economy is no longer embedded in social relations, but social relations are embedded in the economic system. Such a dominance of modern economic conditions implies that socio-cultural structures are determined by the economy. In this context, it is hardly surprising that a value difference exists between ‘social’ and ‘economic’ innovations (innovation hitherto not needing a prefix): Innovations in and through the economy, whose success can be defined and measured in sales and revenue figures, stand in the limelight and are heeded, financed, and applauded. Innovations outside the world of the economy, i.e. in state and civil society domains, not only seem different but receive less attention, funding, and acceptance.

However, this dichotomy is artificial and logically untenable. Some innovations directly target economic enterprises, but innovations in public and civil society sectors may also have economic causes and consequences. What is important here is the innovation’s *objective*: Social innovations create social facts³, whereas economic innovations create added economic value. Neither does it mean that social facts must be positively assessed and desired in any case. Nor should we exclude the possibility that social facts (e.g., practices, norms, lifestyles) may also have economic effects or that economic and technological innovations can lead to new social facts (e.g., Web 2.0 technologies result in new communication patterns).

The most important contributions to introducing and disseminating the classical concept of innovation are rightly attributed to the social scientist Schumpeter⁴. However, the term ‘innovation’ typically did not have a fixed position at any time in his comprehensive oeuvre. The basic elements of what he and others later called ‘innovation’ already appear as ‘new combinations of production factors’ in an early book, disseminated both swiftly and effectively, in which he describes five forms of such new ‘combinations’. Three of these forms can be found nearly unchanged 100 years later, as categories for recording innovations in the so-called *Oslo Manual*, where the categories from the English edition (1934) of Schumpeter’s 1911 work are quoted and form its basis.

Hence, *innovation* without a prefix mainly refers to new products or processes based on advanced technology or new combinations of technical components successfully employed in existing or new markets. Innovation is often regarded as the final product of the scientific generation of new knowledge and its economic application. By promoting new developments in research, technology, and innovation, modern society has considerably expanded its potential to improve present and future living conditions. These developments are currently going further

² “Whereas History and Anthropology know of different economic forms, most of which contain the setting up of markets, they do not know of any economy before ours that was even remotely so dominated and controlled by markets.” (Polanyi 1978, 72)

³ That is “any more or less laid down form of action with the capacity to exert an external compulsion on the individual; or also generally appearing in the field of a given society and possessing a life of its own, independent of its individual expressions” (Durkheim 1984, 5).

⁴ By training and career, Schumpeter was an economist, however so “innovative” as such because he thought and researched in an interdisciplinary manner – especially with reference to Sociology and Political Science. An appreciation by prominent Harvard economists published shortly after his death portrayed him as being a “social scientist” (cf. Harris 1951).

and create new characteristics of innovations. On the one hand, new methods are being employed to increase the economic effectiveness of innovations, such as user-driven innovation or open innovation. On the other hand, concepts stating that the social dimensions of technical innovations should no longer be neglected are gaining influence, but the special qualities of social innovations must also be taken into account.

Table 1: Comparison of the ‘new combinations’ according to Schumpeter and the basic categories (four main types) of ‘innovations’ according to the Oslo Manual

| “New combinations of production factors” (Schumpeter 1911, and subsequent publications): | Four (technical and non-technical) types of innovation (OECD/EUROSTAT 2005, 29): |
|---|---|
| New or better products | Product innovations |
| New production methods | Process innovation |
| Opening up new markets | Marketing |
| New sources of raw materials | Organizational innovations |
| Reorganization of the market position | |

The breakthrough of the Schumpeterian concept of innovation took place in the 1960s. The definition of innovation (differing from ideas and inventions by commercial success in markets) became widely adopted from Schumpeter, and characterizing innovation as a process of creative destruction is traced back to him. However, the originator himself depicted “creative destruction” as a feature of capitalism and not of innovation: “The opening of new foreign or domestic markets and the organizational development of handicraft enterprises and factories into such concerns as U.S. Steel illustrate the same process of an industrial mutation – if I may use this biological expression – that constantly revolutionizes the economic structure from within, constantly destroys the old structure, constantly creating new ones. This process of “creative destruction” is the significant fact for capitalism. Capitalism consists of it, and in it every capitalist structure must live.” (Schumpeter 2005, 137)

Schumpeter’s much-quoted description of “creative destruction” is a sign of *necessary* change, for Schumpeter saw economic development processes not as being driven by the commonly assumed quest for equilibrium, but by instability. However much innovations themselves cause change, by definition innovations must be viewed as necessities of the modern economic and social system – a means for putting itself permanently in a position to face ongoing problems and new challenges.

Innovations are elements of the *modus vivendi* through which the economy and society ensure their existence *in flux*. Schumpeter himself came to the conclusion that even the basic system of economic activity is subject to major changes, as reflected in his assumed impossibility that capitalism could continue to exist: “Can capitalism continue to exist? No, in my opinion not.”⁵

⁵ At this point he adds that this is his *opinion, not a scientific diagnosis*. For “[What] counts with any attempt at a social forecast is not the yes or no summarizing the facts and arguments leading to it, but these facts and arguments themselves. They contain everything that is scientific about the definitive result. Anything else is not science, but prophecy. Any analysis, be it economic or of a different nature will at any rate never be able to contain more than an establishment of the trends existing in an object of observation. These never tell us what will happen to the object, but only what would happen, if they continued to act as they acted in the period covered by our observation and if no other factors appeared.” (Schumpeter 2005, 105)

The 'Knowledge Society': A society of abundant knowledge?

The term *Knowledge Society* indicates a state in the development of humankind, in which 'knowledge' plays specific roles in everyday life, in social relations and economic dynamics from local to global scales. To an unprecedented extent, new and improved knowledge is nowadays produced and accelerated by scientific research and effectuated by innovation. Current and future generations appear to be becoming dependants of the knowledge society. In this perspective, knowledge, represented primarily in science, technology and innovation, takes the place of industry and agriculture as the key attribute for denoting the main characteristic of the society in question. Research and innovation are required to the 'Grand Challenges' of the future. However, a number of critical issues seem to be disguised behind this general and in principle very optimistic assessment of what is termed the knowledge society.

Society in the 21st century may be labeled the 'information society' or the 'knowledge society'. Whatever phrase is used or will be used in the future when looking back with the benefit of hindsight, the present state of affairs results from the daunting success of industry, modernization, research and development in technology, transforming social structures from those of an industrial society towards what we now call the information or the knowledge society (cf. Beniger 1986; Stehr 1994; Castells 1998; Heidenreich 2003).

The concept of the knowledge society emphasizes immaterial and specific intangible features of products and services in economic processes, and of innovations in particular. Thereby the boundaries between the economic and social spheres are becoming blurred. The traditionally predominant view of innovation as an exclusively economic concept needs adaptation and expansion. Social innovations enable new uses of knowledge, involving tacit knowledge as well as scientifically generated facts and cognition. The *world society* (cf. Stichweh 2004; Meyer 2010), emerging yet lagging behind the globalized economy, requires new knowledge, but this is nothing basically new. Knowledge was and is crucial to mankind at any stage in its development to survive and generate what appears as progress. In the case of the knowledge society, it consists of new conditions of knowledge generation, new channels of knowledge diffusion and hitherto unknown methods of knowledge utilization that make the difference.

New forms of knowledge generation by extended functions and roles of science have been termed by Gibbons et al. (1994) as "Mode 2 knowledge production". Science and scientific methods, the evaluation of facts and the verification of results have become increasingly relevant ever since Galileo Galilei attempted to communicate the findings of science to a wider public in the 17th century (*Dialogus*). The Industrial Age was based on exploiting new resources (extending from raw materials, energy, human resources to the scientific comprehension of *laws of nature*), breeding, by virtue of its huge turnover of matter, energy, output and labor, urgent needs for the management of such processes by new and more efficient ways of information processing and knowledge production.

During the development of the *industrial society*, scientific research, technological progress and innovation amplified the production of wealth, yet consequently led to the unbearable depletion of natural resources and many unexpected as well as undesired effects. It became a prerequisite of continuous development to acquire, store and process previously inconceivable amounts and forms of information and knowledge: "The information society ... is not so much the result of any recent social change as of increases begun more than a century ago in the speed of material processing". (Beniger 1986, vii) In the post-industrial era (cf. Bell 1974) of the so-called knowledge society, scientific knowledge production, using multiple sources of data,

information and knowledge, equals the importance of the traditionally accounted factors of production, i.e. soil, labor and capital.

The knowledge society not only requires more knowledge and science. It also produces the 'knowledge paradox'. Science, scientific methods and science-based knowledge are usually seen as providing appreciably more and superior knowledge. Yet they also entail more scrutiny to often controversial issues, on the one hand, and an awesome abundance of 'news', bemusing large sections of even well-educated societies, on the other. Thus, the new production of knowledge at the same time produces an experience of nescience, i. e. the awareness of *not* knowing (Heidenreich 2003).

When considering the notion of the Knowledge Society pertaining to innovation processes, immaterial and specific intangible properties of innovation come to the fore: Innovation may be social innovation allowing for new uses of knowledge, and it may take advantage not only of science-based or professional knowledge, but of *tacit knowledge* too. Identification of knowledge gaps and of lost knowledge could enable the development of very relevant innovations. Instead of permanently generating 'new knowledge', the search for hidden knowledge might become a very relevant field of innovation research and innovation management in the knowledge society.

Expansion of the concept of innovation by social dimensions

For more than 60 years following the Second World War, the capitalist system was marked by constant expansion and growing power globally, largely unchecked after the collapse of the Soviet Union in 1991 and the disappearance of competition between the systems. Thus, it is not surprising that economic categories and expectations are dominating the innovation discourse. But in conjunction with the increasing interest in social innovations in recent years, a postindustrial innovation paradigm is beginning to emerge. In such a paradigm, social innovations as well as technological and economic innovations could be comprehended as integrated components of social change in a 'holistic' interpretation of innovation. The relevance of an innovation should not be gauged exclusively by the respective reference system or the rationale of the economy, society, or technology. Although economic and social innovations differ according to their objectives and logics of action, *all innovations are socially relevant* in that they emerge under social conditions in different contexts and have social effects. Just the same, social innovations which do not aim primarily at economic objectives may also produce economic effects.

From the viewpoint of theoretical consideration, social innovation expands the traditional concept of innovation, prompting major steps towards a new paradigm of innovation to fit the dynamics of the globalized post-industrial society of the 21st century (cf. Howaldt, Jacobsen 2010). The emergent world society, preferably termed knowledge society, needs innovations far beyond the sector of industry or business as a whole. Though business innovations and new technologies will also be necessary in the future, social innovations will become indispensable to make new products and process innovations beneficial in terms of economic, social and environmental sustainability. In addition, the development and shaping of the public sector (public services, security, infrastructures ...) as well as of the civil society sector (NGOs, churches, citizens' initiatives ...) call for social innovations of many kinds, numerous in scope and range. Thereby the critical challenge is to identify how social innovations contribute to the accomplishment of social objectives and to measure the *social outcome* for whom in society.

In the BEPA-Report (2010, 26) a differentiation is emphasized between the *process dimension* and the *output dimension* of social innovations: “The process dimension ... implies that new forms of interaction are established [whereas] ... the output dimension ... refers to the kind of value or output that innovation is expected to deliver: a value that is less concerned with mere profit, and including multiple dimensions of output measurement”. In addition, a very valuable distinction is provided by denoting three particular dimensions of social innovations according to characteristic objectives and intended impacts:

- “*The social demand perspective* ... innovations that respond to social demands that are traditionally not addressed by the market or existing institutions and are directed towards vulnerable groups in society.” ...
- “*The societal challenge perspective* ... innovations that respond to those societal challenges in which the boundary between the social and the economic becomes blurred and that are directed towards society as a whole.” ...
- “*The systemic changes perspective* ... innovations that contribute to the reform of society in the direction of a more participative arena where empowerment and learning are both sources and outcomes of well-being.” (ibid. 2011 edition, p. 36ff.)

Social innovations are not determined solely by the potential of ideas, but rather by the extent of realizing given potentials. These depend on whether the ‘invention’ offers benefit to target groups, and thus a social idea transforms into a social innovation because of utilization of the new practices and their dissemination. As mentioned earlier, social innovation should be considered a *process*, consisting of stages from the generation of an *idea* (*‘ideation’*), on to *intervention, implementation* and *impact* (a *‘4-i-process’*). Ideas (inventiveness and creativity) underlie the concepts and measures proposed, which become innovations by utilization after targeted intervention and successful implementation. If implemented successfully, social innovation entails impact. Dissemination, further up-scaling and replication may take place. At best, it will be adopted and utilized to the extent of what is called ‘saturation of markets’ in the case of business-driven innovations. Regarding social innovations, the equivalent is acceptance and usage by individuals, social groups and organizations concerned. New practices may become regular practices, even standard behaviour and perhaps formally institutionalized. As a result, successful social innovations then complete their *life cycle*. Once a formerly new practice (e.g. the people concerned adopt new roles and relations, or comply with norms, mores or values) becomes standard and institutionalized, it ceases to stand out as an innovation.

Categories for determining social innovations

Until now, social innovations have hardly been analyzed as an independent phenomenon in social scientific innovation research, which is heavily focused on the social prerequisites, consequences and processes in the context of technical innovations. This is why social innovations usually are not so much present as a defined concept in its own right, but rather as a descriptive metaphor in the context of phenomena of social and technological change⁶.

For this reason, it must be established that, notwithstanding the popular boom of the topic and the increasingly recognized relevance of social innovations, the foundations of respective scientific analysis are incomplete with parts still to be created, or at any rate standardized, to the extent that approaches are available. To this end, two central elements of such a foundation

⁶ Cf. Howaldt and Schwarz 2010

will be discussed here: first, a general definition of social innovations, with the idea of changed social practice at the core; second, a theoretically derived concept of operable categories for recording, describing, and analyzing *main types of social innovations*.

*Social innovations are new practices for resolving societal challenges, which are adopted and utilized by individuals, social groups and organizations concerned.*⁷ Ideas underlie concepts and measures proposed, which, after targeted intervention and successful implementation, *become innovations only when utilized*. Social innovations are not determined solely by the potential of an idea, but also by whether and to what extent the potential of an idea is realized. It depends on whether an 'invention' yields benefit to target groups. Thus a social idea mutates into a social innovation in the process of implementation, usage and dissemination.

Under the conditions of globalization, innovations of all kinds affect larger and larger sections of society. They shape not only processes and trends in Civil Society, but also in public administration, in political institutions, in the economy, and in professional associations of the social partners. The behavior of individuals in small groups (the *micro level* of society) can be affected just as much as e.g., organizational development in enterprises, the structuring of teaching and learning forms in education, and various societal institutions (the *meso level*), or structurally effective regulations in the social constitution (social legislation, pension schemes, health care, taxation systems, etc. (the *macro level*). These levels provide directions to locate social innovations in a given society.

The intention, testing, implementation, and dissemination of a new social practice that is enforceable against others will lead, as an innovation, to deviations from the routine current of reproducing stereotyped practices. The features of innovations in general, and of social innovations as defined here, can be observed in the actions and behavior of individuals and groups, and in social relations and institutions. Max Weber offers theoretical approaches in the concept of social action. At the center of Weber's theory of social action stands the subjective 'meaning' of action, i.e., the intention, aim, and purpose of an intervention, and the reference of this action towards 'others' (persons, groups, institutions, the social environment): "Social action' ... intends to refer to such actions that in terms of the actor or actors relate to the behavior of *others* and take their bearings from it." (Weber 2005, 3)

Whenever social innovations are manifested in social practices, in the diction of action theory, it follows that they either lead to new forms of social action or presuppose new social action. In either case, social innovations are expressed in a new dimension or direction of what constitutes the meaning of action and its relation to others. Social action in families, school classes, working groups, and also in large social systems (administrative entities, states, major concerns etc.), is determined by given roles and functions. However, a recasting of these very roles and functions can modify the social systems themselves or even affect the processes of social change at large. The latter depends on the form and 'range' of concrete innovations, i.e. in case of *systemic* social innovations *at the macro level* of society.

It seems necessary here to refer to the difference between incremental innovations (improving innovations), in particular the frequent unobtrusiveness of social innovations on the one hand, and 'basic innovations' relevant to the many people and stakeholders affected on the other hand: "[The evolution of] human beings ... repeatedly shows forks and sprouting branches. A fork stands for the opening of a new path, a new work method. ... I term such a change in

⁷ ZSI Discussion Paper 13, p. 2: www.zsi.at/dp

direction from the previously customary practice a basic innovation. Technological basic innovations create new trades or branches of industry, non-technological basic innovations open up new fields of activity in the sphere of culture, in public administration, and in social services, etc. Basic innovations create new terrain for human activity.” (Mensch 1975, 56f.)

To make the entire spectrum of social innovations accessible to scientific analysis, both small-scale (affecting individuals) and large-scale (affecting social structures) changes must be defined in categories, along with the *processes of different ranges in all functional systems of society*. A slightly adapted recourse to some elements of Parsons’ structural function theory appears suitable, despite the fact (or perhaps even because) this theory of social systems understands *function* as a social component contributing to maintain a specific system status, thus *integrating* a social system.

Innovations contribute to *stabilizing* systems, although certain adaptations are involved. ‘Stability’ can be achieved by safeguarding the status quo *or* by change, although change can also create instability, leading to complete system collapse, the demolition of old systems, and building up of new ones. In these processes, which often occur in parallel in society, innovations have a special significance. As explained in Schumpeter’s innovation theory, they guarantee the survival of enterprises (maintaining stability), but keep in motion the more comprehensive process of “*creative destruction*” (dynamics of change).

The meanings and effects of innovations do not remain restricted to the respective ‘functional system’: Technological and economic innovations affect not only the functional system of the economy, but also the other functional systems dealt with by Parsons, i.e., politics, law, and culture. It is equally evident that social innovations not only exert an influence on *culture* or *politics*, but also on the functional systems of *law* and *economy*. Within these systems the functional area of *integration*⁸ is important for maintaining the system as well as for change.

According to Parsons, four *structural categories* come together in all social systems, i.e. “roles,” “collective,” “norms,” and “values.” *Roles* refer to the personal assignment or assumption of assignments; the *collective* stands for social relations abstracting from personal attributes; *norms* are rules of the most varied kinds (from house rules to laws and international agreements); *values* express general patterns of desirable modes of behavior and attitudes which usually have the character of orientation, but to a certain extent also normative significance. These structural categories can be used to identify or designate different *types of social innovations*. The amended typology of innovations – which previously covered only *products, processes, marketing, and organization*, and exclusively in the sector of the economy – would then include *roles, relations*⁹, *norms, and values* as categories of social innovations¹⁰ in all functional systems of society as a whole.

Such an enlarged typology of innovations goes beyond the sector of the economy: It can also make innovations in the State (in public administration, regional bodies, etc.) and in Civil Society (the so-called “Third Sector”) the objects of empirical research. Of course, the technical and

⁸ Parsons (1976) describes four necessary basic functions as components of action systems, summarized in the so-called “AGIL Scheme”: Adaptation, Goal attainment, Integration, and Latency.

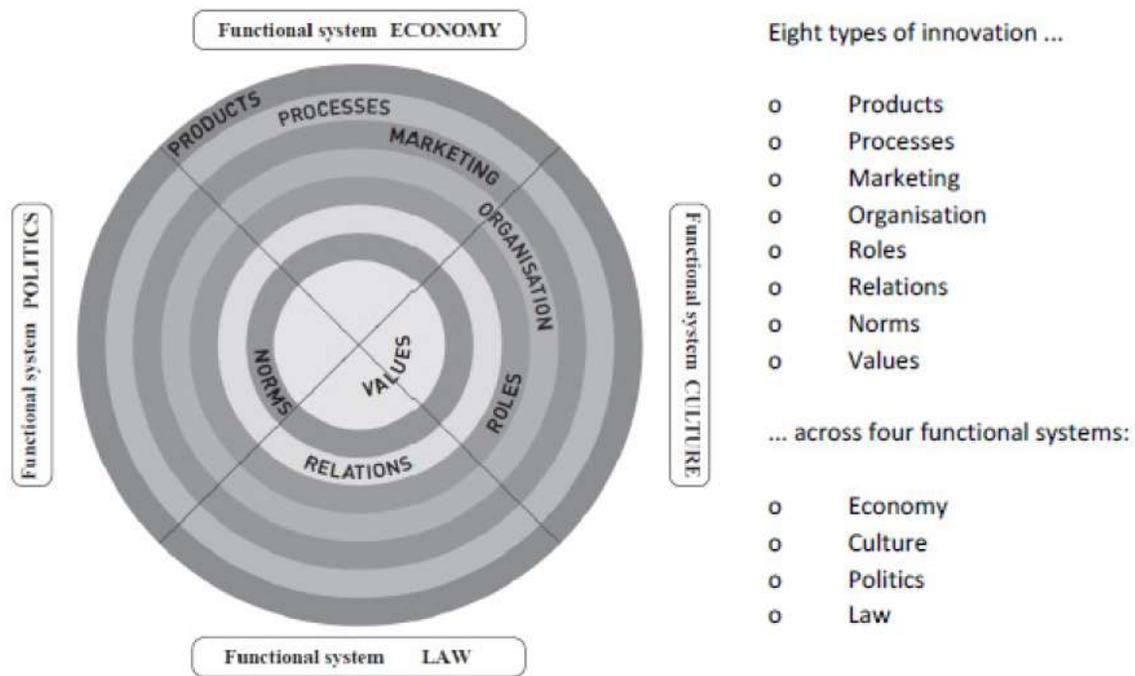
⁹ Instead of Parsons’ structural category “collective”, I choose the concept of “relations”, for Parsons (1976, 181) is also primarily concerned with interactions (based on expectations, achievements, rights and duties) that become effective in a collective.

¹⁰ This categorization also proceeds from the premise that (much like “technical/non-technical” in the case of economic innovations) formal and informal variants can be differentiated in the case of social innovations.

non-technical economic innovations are and remain of salient significance for the functional area of the economy, just as innovations in values must primarily be situated in the functional area of culture.

One way to represent innovations of different kinds in relation to one another, and in Parsons' functional systems, is a circular chart (see Fig. 1) in which innovations are arranged from outside to inside according to the degree of their ordinary plasticity. The sequence goes from outside, the material environment of society (the most quickly changeable 'surface' of social systems¹¹), to the inside, to social structures most difficult to change and relatively more resistant to innovations.

Figure 1: Types of innovations in social functional systems



Source: Author's chart, 2011

This representation shows that different innovations not only interact with one another, but may also occur and operate in all social functional systems. In it, the categories of innovations are intended to help analyze the influences of and interactions between new elements of social practice, the objectives of novelties, their functions, and effects, in empirical research.

Theoretical considerations and definitions of this kind are necessary to prepare the ground scientifically for future innovation research to attain a position from which to record, comprehend, and evaluate the activities required to meet the so-called "Grand Challenges"¹² and innovations emerging in this context. This places great demands on interdisciplinary and

¹¹ "The material environment of human life ... forms a relatively unsteady foundation ... for social conditions. But in the weakness of this structure lie its meanings: if it bursts, a lot is at stake; to prevent this, ... long-term, more stable elements help to shape social conditions." (Hochgerner 1986, 63)

¹² Above all population development, poverty, climate, the environment, and energy; see also the 'Millennium Development Goals': <http://www.un.org/millenniumgoals/>

trans-disciplinary research in the social and economic sciences and on their ability not only to develop adequate methods and research programs, but also to reflect on their relationship to social practice and to deliberately utilize their own organizational competences.

The ‘Socio-Cultural Learning Cycle’ and the relevance of knowledge in the Knowledge Society

Any particular innovation activity resulting in a successfully implemented new and, in operational terms, better social practice is part of one or more of the functional systems introduced above. In addition, its ambitions as well as concrete realization are embedded in the social context of the players involved, either in favor or in opposition to the establishment of new or alteration of existing practices respectively. Such complex processes are depicted in Fig. 2 as a socio-cultural ‘Learning Cycle’. In it a number of intra- and interpersonal factors, social, cultural and external features are connected. These produce impact on what may finally become an empirical ‘social fact’¹³ in the form of new behavior and innovative social practice.

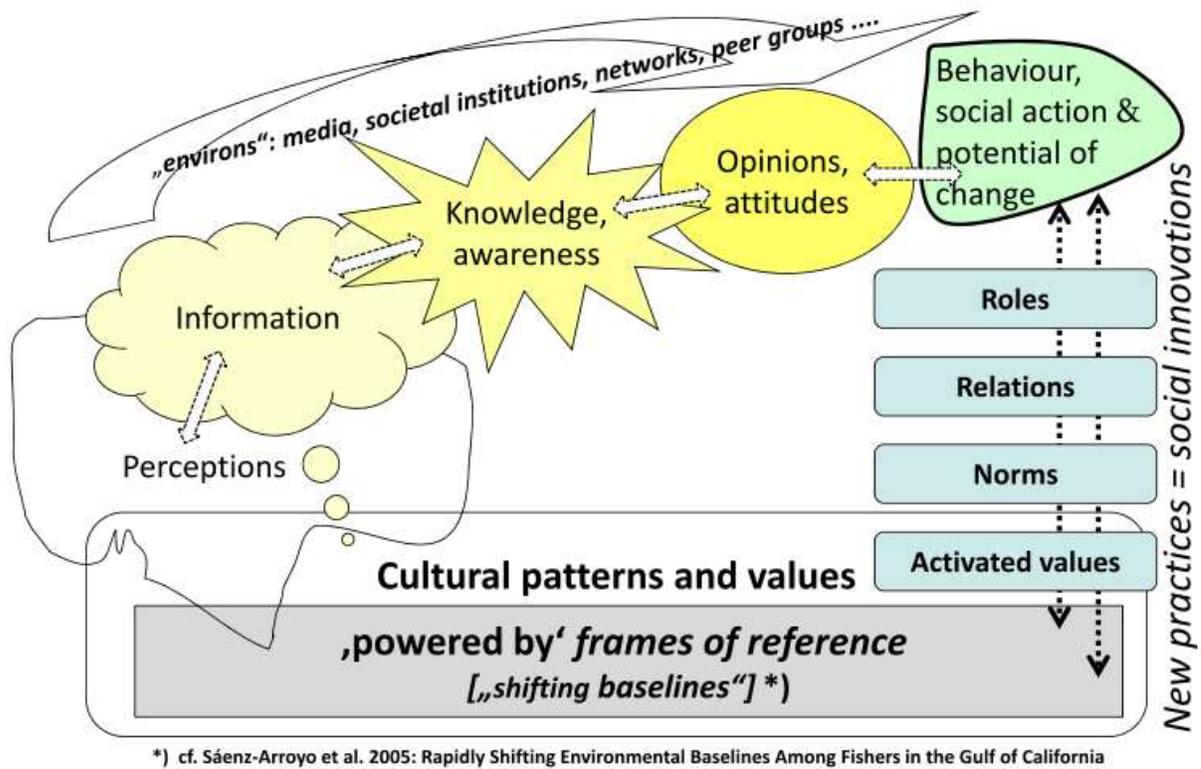
The learning cycle is anchored in the *frames of reference*, accordant cultural patterns and values dominant in a certain society. Such a – usually robust – pre-condition of social action leads to selective *perceptions* of societal facts and developments, further favoring the intake of specific sets of *information* that may condense in more or less consolidated *knowledge*. From what one considers own knowledge, he or she will deduce *attitudes and opinions*, which may justify and give reasons for particular *behavior*. If this behavior appears new and deviating from previous dominant practices, *social innovation* takes place in one of the forms defined in the previous chapter, as new *roles, relations, norms, or values*. Since ‘values’ may be deep rooted in the fundamental layer of cultural patterns, yet at the same time often not made a strict guideline of everyday behavior, I refer here to the ‘*activation*’ of *existing values* as just as much relevant as real ‘new’ values.

Likewise, the learning cycle may take the other direction: Starting from a given social situation novel social practice may become enforced top-down, as can be seen, e.g., in the case of one of the most impactful social innovations of the past: the implementation of compulsory schooling. The gradually enforced new rule changed behavior prior to forming appropriate attitudes and opinions in the public at large, stimulating opposition and discontent as side-effects. Yet people learn to adapt to the new realities and work with compatible knowledge and perceptions. However, by either way social innovations in their various forms are key to close gaps between actual behavior and the basic cultural patterns in society.

In a given ‘Innovation Culture’ (Hochgerner 2009) essential studies of change in the learning cycle should consist in *searching for tipping points* concerning individual concepts, attitudes and behavior, as well as changing *frames of reference* and shifting baselines with fundamental impact on patterns of perception and selective take-up (and use) of information and knowledge (cf. Goffman 1974; Neitzel/Welzer 2011; Casti 2010; Sáenz-Arroyo 2005).

¹³ That is “any more or less laid down form of action with the capacity to exert an external compulsion on the individual; or also generally appearing in the field of a given society and possessing a life of its own, independent of its individual expressions” (Durkheim 1984, 5).

Figure 2: The socio-cultural learning cycle - amended by social innovations

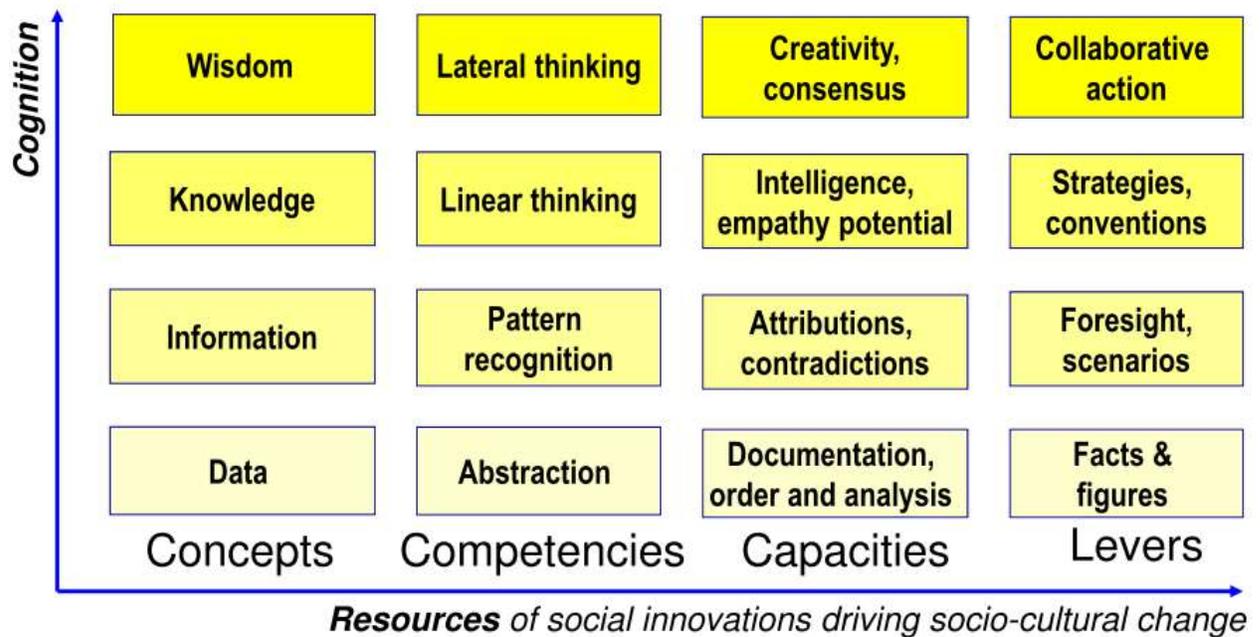


Data, information and knowledge constitute different levels of cognition, which on top may reach what in general debates about the knowledge society seems ignored, namely *wisdom*. Thereby I look at data as formal facts, whereas information consists of structured data, and knowledge bears the competence to decode, analyze and construe the content of information. Wisdom additionally includes the capacity to reflect on knowledge even to the extent of accepting varieties of knowledge and truth – on to the Socratic confession of not knowing.

The decisive criterion of the knowledge society in its fuzzy distinction from the industrial society is not sheer lots of 'more knowledge'. Of course, more and genuinely new knowledge is required, but this nothing basically new. Knowledge was crucial at any stage of human development to survive and to make what later generations usually call progress, which sometimes appears radical enough to find a new term for an era. In case of the knowledge society it is critical to understand *knowledge* as *capability to act* (Stehr 1994, 208). Thus social innovation in this context may be considered any activity that meets the criteria of the definition, and expands not only the capacity to act, but enables and leads to concrete action.

In Fig. 3, the 'stairway to cognition' is put in relation to 'resources of innovation', allowing for analysis of steps to move up and to the right, bringing in conjunction increasingly sophisticated components to finally facilitate the most intelligent collaborative social action.

Figure 3: From knowledge to action



Future prospects: Social innovations for the 21st century

At present and in the future, in addition to technical and economic innovations, a multiplicity of minor and major social innovations will become indispensable. Without them, peace and development – in keeping with the standards of industrial potentials – would be at extreme risk in a world society of eight to ten billion people, especially in light of the problems such as climate change and the growing gap between the rich and the poor.

Challenges like climate change, poverty next to impudent wealth, abundance, waste of human and natural resources, population growth and ageing societies necessitate novel modes of collaboration on world level among states, civil society organizations and international bodies. Solutions to counter global threats as well as to obtain appreciated effects of the positive potential of globalization require social and political structures beyond the traditional boundaries of nation states. Their capacity becomes insufficient as is the equalization of nation state with national society, and is still and too often presumed ethnic homogeneity. Societies in nation states become ever more diverse – an instance that should be considered an option to gain additional resources instead of merely a source of instability and potential conflict.

“The most urgent and important innovation advance in the 21st century will take place in the social field. Technical innovations will continue, of course, and bring about a materially and immaterially utterly changed environment and new living conditions in comparison with previous possibilities; but the social innovations will be those that the inhabitants of this world must first produce or ensure.” (Hochgerner 1999, 37) To meet grand challenges, an appropriate big shift in conceptualizing and shaping human society on local, national, and global levels becomes imperative. With reference to these challenges and the diagnosis of society as an

appendix to the economy (Polanyi 1978, 88), the most urgent basic innovation of the 21st century can be formulated as the *re-integration of the economy in society*.¹⁴

To this end, and primarily, future economic indicators – aiming at deriving and justifying economic, labor-market, and social-political measures – must measure not only productivity, but above all prosperity and standards of quality of life. There are important approaches to this, and significant contributions have already been made to its systematization by the *Commission on the Measurement of Economic Performance and Social Progress*, headed by Joseph Stiglitz, Amartya Sen, and Jean-Paul Fitoussi¹⁵.

Secondly, beyond and apart from eliminating shortages in terms of satisfying real needs, it is high time to establish strategies for surplus management or ‘management of abundance’. There is an abundant wealth of knowledge and financial resources as well as of potential energy. Shortages are in fact *produced* because of the powerful capitalist system of the so-called ‘market economy’, which actually is captured by critical sectors of the finance industry and the bone-crushing power of *financialization*¹⁶.

The current crisis and the suicidal addiction of policies to austerity measures require an urgent and radical turn towards politics refraining from bowing to imagined inherent necessities of seemingly anonymous ‘markets’, instead taking decisions clearly aimed at improving quality of life for all. It becomes a salient task for the economics and economic policy to *not* adhere anymore to the old prioritized task of securing unlimited growth in any sort of markets, whilst the State and Civil Society are called for to balance deficits, social disparities and resulting conflicts. Novel – i.e. innovative – approaches are required following the rationales of an inclusive society in the double sense of the word: To be inclusive in terms of all groups of society, yet also to include the economic system as part, not as ‘godfather’ and director of the society.

This initially requires a “state that is in the position effectively to supervise and sustainably to tax the profits skimmed off on money markets” (Bourdieu 1998, 119), preferential treatment of the production and services sectors over critical sections of the finance industry¹⁷, special funds for a Global Marshall Plan¹⁸, a ban on speculation with foodstuffs and reducing waste of food. In the EU, these and additional measures could be clustered in a *New Deal for Europe* (Schulmeister 2010).

¹⁴ The fact that the ‘economy’ need not be conceived of as being external to society is shown, for instance, by Parsons’ (1976) theoretical concept, used in this article to form categories, which describes the economy *as one of four social functional systems*.

¹⁵ “While many of our measures are directed at ascertaining short-run movements in the level of market activity, the Commission considers that the time has come to make a clear move from measuring production to measuring welfare, to try to close the gap between our measures of economic performance and widespread perceptions of well-being.” Stiglitz, Sen und Fitoussi: *The Measurement of Economic Performance and Social Progress Revisited. Reflections and Overview*, 63. www.stiglitz-sen-fitoussi.fr

¹⁶ „Financialization“ is defined as a „pattern of accumulation in which profit making occurs increasingly through financial channels rather than through trade and commodity production“. Cf. Krippner, Greta R., 2004: ‘What is Financialization?’; mimeo, UCLA Department of Sociology, p. 14. Also good and informative reading: T. I. Palley, 2007, www.levyinstitute.org/pubs/wp_525.pdf

¹⁷ Die Entgrenzung des Finanzsektors – das Problem hinter den Problemen: cf. Radermacher 2010, 70 ff.

¹⁸ Cf. www.globalmarshallplan.org

References

- Beniger, James. 1986. *The Control Revolution. Technological and Economic Origins of the Information Society*, Cambridge/Mass., Harvard Univ. Press.
- Bell, Daniel. 1974. *The Coming of Post-Industrial Society*, New York: Harper.
- Bourdieu, Pierre. 1998. *Praktische Vernunft. Zur Theorie des Handelns*. Frankfurt a. M.: Suhrkamp.
- BEPA (Bureau of European Policy Advisers). 2010. Empowering people, driving change: Social innovation in the European Union. Brussels: European Commission.
http://ec.europa.eu/bepa/pdf/publications_pdf/social_innovation.pdf
- Castells, M. 1998. *End of Millennium. The Information Age. Economy, Society and Culture*, Vol.III, Malden-Oxford: Blackwell.
- Casti, John L. 2010. *Mood Matters. From Rising Skirt Lengths to the Collapse of World Powers*. New York: Copernicus Books – Springer Science + Business Media.
- Durkheim, Emile. 1984. *Regeln der soziologischen Methode* (1895). Neuwied and Berlin: Luchterhand.
- Gibbons, M. et al. 1994. *The New Production of Knowledge. The Dynamics of Science and Research in Contemporary Societies*, London: Sage.
- Goffman, Erving. 1974. *Frame Analysis. An Essay on the Organization of Experiences*. Available for free download at <http://de.scribd.com/doc/36584574/Erving-Goffman-Frame-Analysis>
- Harris, Seymour E. (ed.). 1951. *Joseph A. Schumpeter: Social Scientist*. Cambridge, Mass.: Harvard University Press.
- Heidenreich, M. 2003. Die Debatte um die Wissensgesellschaft. In Bösch, S., Schulz-Schäffner, I. (eds.), *Wissenschaft in der Wissensgesellschaft*. Opladen: Westdeutscher Verlag.
- Hochgerner, Josef. 1986. *Arbeit und Technik. Einführung in die Techniksoziologie*. Stuttgart: Kohlhammer.
- Hochgerner, Josef. 1999. *Jenseits der großen Transformation. Arbeit, Technik und Wissen in der Informationsgesellschaft*. Vienna: Löcker.
- Hochgerner, Josef. 2009. 'Innovation Processes in the Dynamics of Social Change'. In *Innovation Cultures. Challenge and Learning Strategy*, Jiří Loudin and Klaus Schuch (eds.), 17-45. Prague: Filosofia.
- Howaldt, Jürgen, Heike Jacobsen (eds.). 2010. *Soziale Innovation. Auf dem Weg zu einem postindustriellen Innovationsparadigma*. Dortmunder Beiträge zur Sozialforschung. Wiesbaden: VS Verlag.
- Howaldt, Jürgen, Michael Schwarz. 2010. 'Soziale Innovation – Konzepte, Forschungsfelder und perspektive'. In *Soziale Innovation. Auf dem Weg zu einem postindustriellen Innovationsparadigma*, 87-108. Wiesbaden: VS Verlag.
- Krippner, G., 2005, 'The financialization of the American economy'. In *Socio-Economic Review* 2005 3(2), 173-208.
- Mensch, Gerhard. 1977. *Das technologische Patt. Innovationen überwinden die Depression*. Frankfurt a. M.: Fischer TBV.

- Meyer, J. 2010. 'World Society, Institutional Theories, and the Actor'. In *Annual Review of Sociology*, 36,1-20.
- Neitzel, Sönke, Welzer, Harald. 2011. *Soldaten. Protokolle vom Kämpfen, Töten und Sterben*. Frankfurt/M.: S. Fischer.
- OECD, and EUROSTAT. 2005. *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data*. Third Edition. Paris: OECD.
- Palley, T. 2007. *Financialisation. What it is and why it matters*, http://www.levyinstitute.org/pubs/wp_525.pdf
- Parsons, Talcott. 1976. *Zur Theorie des Sozialsystems* (1951). Opladen: Westdeutscher Verlag.
- Polanyi, Karl. 1978. *The Great Transformation. Politische und ökonomische Ursprünge von Gesellschaften und Wirtschaftssystemen* (1944). Frankfurt a. M.: Suhrkamp.
- Radermacher, Franz Josef. 2010. *Die Zukunft unserer Welt. Navigieren in schwierigem Gelände*. Essen: Edition Stifterverband.
- Sáenz-Arroyo, Andrea, et al. 2005. *Rapidly shifting environmental baselines among fishers of the Gulf of California*. Proc Biol Sci. 272: The Royal Society. 1957–1962.
- Schulmeister, Stephan. 2010. *Mitten in der großen Krise. Ein „New Deal“ für Europa*. Wiener Vorlesungen, Edition Gesellschaftskritik, Vol. 7. Vienna: Picus.
- Schumpeter, Joseph A. 1934. *The Theory of Economic Development*. Cambridge, Mass.: Harvard University Press.
- Schumpeter, Joseph A. 2006. *Theorie der wirtschaftlichen Entwicklung. Eine Untersuchung über Unternehmergewinn, Kapital, Kredit, Zins und den Konjunkturzyklus* (1911). Berlin: Duncker & Humblot.
- Schumpeter, Joseph A. 2005. *Kapitalismus, Sozialismus und Demokratie* (1942). Tübingen: UTB.
- Stehr, Nico. 1994. *Knowledge Societies*, London: Sage.
- Stichweh, Rudolf. 2004. *On the Genesis of World Society: Innovations and Mechanisms*. Luzern: <http://www.unilu.ch/files/26stwworldsoc.pdf>
- Weber, Max. 2005. *Wirtschaft und Gesellschaft* (1922). Frankfurt a. M.: Zweitausendeins.
- ZSI (Zentrum für Soziale Innovation). 2012. 'All Innovations are Socially Relevant'. In *ZSI Discussion Papers*, Vol. 13. <https://www.zsi.at/dp>