**Is Knowledge Power or Knowledge Skills as a Form of Productive Detour Action (Umwegshandeln)**

**Nico Stehr**

Karl Mannheim Professor for Cultural Studies, Zeppelin University,

D-88045 Friedrichshafen| Lake Constance, Germany

Email [nico.stehr@zu.de](mailto:nico.stehr@zu.de)

**April 2016**

**Abstract**

Knowledge is an indispensable input in decision-making, in production and in virtually all aspects of everyday life, consciously carried out. However, more important are knowledge skills – as a form of “productive detour action.” These cognitive and social resources defy orthodox forms of economic knowledge and quantification. The general aim in this research project is therefore twofold: first, to provide a sound **empirical** anchoring for theories of modern society (e.g. information society, knowledge society, network society, learning society) and, in doing so, initiate a fruitful discussion (and possible convergence) of different **theoretical** approaches – not least in view of their practical usefulness - to the transformation of modern societies; second, to specify (and provide an empirical foundation) for the concept of -- multiple (individual and collective) -- knowledge skills rather than merely cognitive abilities, thus drawing attention to an increasingly significant social precondition for change in modern societies. Knowledge skills transcend societal subsystems constitute resources that can be put to tactical and strategic use. Understanding the role of knowledge skills rather than merely knowledge and information should enhance our capacities to act and to influence social developments in modern societies accordingly. More specifically, what is needed for people, institutions and societies to create added value and be successful under conditions of the digital revolution is *not* an ever more equal distribution of and access to knowledge and information or broad participation rates in secondary and tertiary educational institutions around the globe. What are needed to be successful are **knowledge skills**. The central hypothesis is that knowledge skills as intimately linked to achievement and innovation.

**Is Knowledge Power?**

The understanding of human societies requires … testable theoretical models which can help to determine and to explain the structure and direction of long-term social processes – i.e. in the last resort, the development of humanity.

Norbert Elias (1987:226)

The industrial age is a thing of the past. But how is today’s society functioning? What matters, rather than information and knowledge, are knowledge skills that create added cultural and economic value, sustain democracy and support solidarity in society. [[1]](#footnote-1) Knowledge skills constitute *resources* that can be put to tactical and strategic use. However, these cognitive and social resources defy orthodox forms of economic knowledge and so far quantification.

The sociology of knowledge and the economics of knowledge have undergone a comprehensive evolution of their premises and analyses in recent decades. This evolution has enabled us to come to a much better understanding of the conditions of modern society.

The ***economics of knowledge*** has substantially enhanced our insight into economic systems (cf. Keller and Yeaple, 2013). This includes issues such as the conditions of economic growth in modern economic systems, the transformation of the world of work, the “mobility” of knowledge, or so-called knowledge management. Modern ***sociology of knowledge*** has comprehensively contributed to a novel understanding of the social system of science and research, its intellectual organization and societal impact. And it has proposed an extensive and critical analysis of the role of special knowledge in political decision-making processes.

These developments of the economics of knowledge and the sociology of knowledge have favored the emergence of concepts such as ***post-industrial society*** (Bell, 1973), ***knowledge society*** (Böhme and Stehr, 1986; Stehr, 1994), ***information society*** (e.g. Mattelart, [2001] 2003), ***network society*** (Castells, 1996), ***risk society*** (Beck, 1986), ***learning******society*** (Stiglitz and Greenwald, 2014), ***knowledge-based*** or ***creative economy*** (Stehr, 2001; Florida, 2002) or, less common, ***science society*** (Kreibich, 1986). All these concepts have been widely discussed in recent decades, and not only in the realm of science.

Irrespective of the different genealogies of these theories, their mutual criticism of key assumptions, or their societal impact as registered in the institutions of modern societies and transnational organizations (e.g. the European Union), these theoretical approaches share a striking ***common*** ***deficit*** on the empirical as well as theoretical level: they can rarely relate to sound empirical information, on the one hand; and they are lacking in theoretical foundation, on the other (which, incidentally, is another empirical deficit).

The theoretical deficit of these approaches or, in positive terms, the primary theoretical focus of existing theories of modern society is their ***functional*** interest. Due to this bias, those theories of modern societies that adhere to an understanding of knowledge as a key factor of societal change focus on the ***consequences*** – for society as a whole, for institutions, for individuals – of the social role of knowledge in terms of, for instance, knowledge-based economy (cf. Stehr, 2001), knowledge policies as a novel political field (see Stehr, 2003) or the consequences of the globalization of knowledge (Stehr, 2005; Stehr and Adolf, 2015).

**Key research guiding interests**

We have very insecure knowledge about the extent to which historical transformations and *the social distribution of knowledge* are causes of general social change.

Thomas Luckmann ([1982] 2002:82; emphasis added)

The key interest of my study therefore is, first, to provide a sound empiricalanchoring for theories of modern society and, in doing so, contribute to a fruitful further evolution (and possible convergence) of various theoretical approaches to the transformation of modern societies. It is, second, to specify (and provide an empirical foundation for) the concept of (individual and collective) ***knowledge skills*** (knowledgeability),[[2]](#footnote-2) thus drawing attention to an increasingly significant social precondition for change and innovation in modern societies and heightening our understanding of collective and individual capacities to act (as well as of the actual opportunities for effective action). The differentiation between knowledge and knowledge skills is analytically (and empirically) significant. The differentiation assures that skills, knowledge and knowledge skills are not conflated, as is the case in a number of recent theoretical efforts by economists examining the importance of knowledge in production and organization (e.g. Garicano and Rossi-Hansberg, 2015: 3).

The influence of knowledge skills transcends the boundaries of social systems. In modern *economic* systems, knowledge skills are akin to *immaterial labor* including novel forms of unpaid labor such as “cultural/technical/affective production” (Terranova, 2000: 43). In the political system, such capacities are foundations for the exercise of power. More concretely, the question is not only what knowledge but – more specifically – what knowledge skills are required for people and institutions to succeed and generate “added value” not only in the society or in the labor market but, for instance, under the conditions of the digital revolution (see Sachs and Kotlikoff, 2012).

Such a shift in our framing of modern society -- and therefore critical departure toward a firmer understanding of the nature of modern society -- is especially appropriate in light of the growing “flat” access to and distribution of information and knowledge around the global; as well as increasingly broad participation rates in secondary and tertiary educational institutions around the world. The secular developments diminish but do not eliminate the societal significance of information and knowledge as such.[[3]](#footnote-3) Appropriation will be less important than extension and reconfiguration (cf. Stehr, 2

The ***empirical deficit*** of the theories of modern societies is rather easy to define: our knowledge of a number of relevant statistical indexes (that are referred to in the various theories I listed) is still lacking, is inadequate or has not yet been fully assessed. Examples on the individual or micro level are inadequate achievement tests such as IQ tests that measure a narrow cognitive skills, and do not extend to personality or social traits that in turn constitute abilities important in many social situations (cf. Kautz, Heckman, Diris, Weel and Borghans, 2014) and on the macro/micro level, refer to controversial issues such as the volume of knowledge-based economy, the transformation by knowledge of the world of work or especially the empirical specification (using the crude indicator of “years of schooling” or the “strength of the effect of education levels” [Ciccone and Papaioannou, 2009:66]) of what is called human capital. [[4]](#footnote-4) In other words, it will be of theoretical and practical interest to test novel indicators of knowledge skills, both directly and indirect and both at the micro and macro level as characteristic features of modern societies.

The ***theoretical deficit*** of the theories of modern societies is harder to specify and to empirically illustrate. Knowledgeability is a “wicked problem” (cf. Ritter and Webber, 1973) that in all likelihood can only be measured by relying on a cluster of **indirect indicators**. The general thesis is that focusing on different knowledge skills might improve our understanding of the causes of societal change, allow us to better differentiate between regions, groups of people, or societies, highlight novel consequences of the unequal distribution of knowledge skills and, last but not least, suggest relevant opportunities for action (i.e. opportunities to influence societal development). It can be assumed that there is a wide variety of processes (paths) *for developing* what become socially unequally distributed knowledge skills.

**Specifying knowledge skills**

Knowledge skills represent the social and cognitive ability to engage in *detour action* (*Umweghandlungen*). [[5]](#footnote-5) A uniform distribution of knowledge in society is impossible. A shift of attention towards knowledgeability (or the lack of it) is likely to not only bring into play the foundations of social change in modern societies, e.g. knowledgeability as a novel *element* of social inequality, but to highlight novel opportunities for economic action, or enhanced and fresh opportunities for political and social *participation* and conflicts. Concerning the realm of politics and political participation, in particular, the competences that make up knowledgeability lead to an (objective and subjective) enhancement of political competence and a deeper interest in political issues, encourage the intake and processing of information, and enhance the capacity to rationally reflect on political issues, make independent political decisions, exercise political influence on other actors and, last but not least, intensify and extend the pressure on major institutions (the church, the state, the economy, the education system) to deliver on their *accountability* to citizens.

But exactly what are the specific cognitive and social resources for action that can be expected to bring about novel political conflicts as well as opportunities for participation? How are these capacities to act *distributed* in a society? Exactly how does knowledgeability operate as a generalized power resource in the context of political, economic, international or everyday opportunities for action, or conflict? To what extent do knowledge skills rather than other capacities to act, for example, power, authority or violence become the core assets in modern societies? [[6]](#footnote-6)

Knowledgeabilitycan be defined as a cluster of social and intellectual competences and capacities, i.e. the skills and qualifications needed to accomplish or avoid something.

Knowlegeability is more than knowledge but implies knowledge about knowledge as an attribute. The knowledge skills to be specified here do not only have an important functional value for society but also an intrinsic value that is essential constituent of a self-determined life. In this respect, the knowledgeability approach has a certain affinity to the capabilities approach elaborated both separately and jointly by Amartya Sen (e.g. 1984; 2002) and Martha Nussbaum (e.g. 2000): humans are self-determined beings that rely on specific capabilities to negotiate their lives in cooperation and reciprocity with others. Exercising the human capabilities identified by Nussbaum and Sen in order to achieve certain goals is what makes life human: “The central capabilities are not just instrumental to further pursuits: they are held to have value in themselves, in making the life that includes them fully human” (Nussbaum, 2000: 74).[[7]](#footnote-7)

The best way to unbundle this cluster, that is, to specify individual knowledge-based resources for action, is to list these resources and values such as actors will mobilize them in accordance with what is required for taking concrete action (see Walker, 2008), for instance to appropriate the institutional rights to make decisions (cf. Jensen and Meckling, 1992). The diverse distribution patterns of these competences as well as their substitutability and the multiple combinations of different knowledge-based competences in response to varying requirements are an empirical challenge. They also imply that the concrete social differences to be found in a modern knowledge society are less coherent, less one-dimensional and, in part, even more invisible than the inequality structures of, for instance, industrial society. Inequality structures in the knowledge society are heterogeneous figurations and highly situational social differentiations. More than a century ago, Georg Simmel ([1907] 1978: 440) already noted that “the rise in the level of knowledge as a whole does not by any means bring about a general leveling” – let alone bring it about as a necessary consequence – but will rather entail a more or less extensive disappearance of strong and resistant social inequalities in modern societies. This is still a utopian idea. I will now briefly list the most relevant knowledge-based action competences that have a bearing on the structure of socio-political participation:

* **The *capacity to make use of discretion***: Socially constructed rules, norms and standards of common and non-common behavior as well as their socially mediated implementation and control hardly ever come without a discretionary margin. Thus they allow for margins of interpretation and execution that “expert” actors may in a specific situation draw on as a capacity to gain advantages or avoid disadvantages. The capacity to make use of discretion thus implies the opportunity to gain a relative advantage, be it in view of traffic rules, tax laws, investment options, careers, education and training, income, or whatever field. A much-cited example is the problem of the “vanishing taxpayer”: tax authorities across the globe see their revenue diminish because of corporations and transactions that make use of their mobility to practice tax avoidance. Electronic transactions are very hard to control, at any rate (cf. *The Economist*, May 31, 1997).
* **The *capacity to organize protection***: The incapacity to organize adequate protection may entail considerable symbolic or material costs. The capacity to identify opportunities and take protective measures depends on the actors’ specific competence to access special knowledge to safeguard their property, private resources (see Klapper, Lusardi and Panos, 2012; Jessoe and Rapson, 2014) and securities from structural or unusual devaluation.
* **The *capacity and skill to speak*** (cf. also Bourdieu, 1975) and to *effectively participate*: This capacity increasingly involves the capacity to adequately mobilize knowledge in relevant contexts and is more or less directly paralleled by a social demarcation from those who lack this capacity to speak (in the sense here implied). One of the opportunities to exercise democratic control is defined by the capacity to put issues on the political agenda; another one by the capacity to call into question expert opinions (cf. Feyerabend, [1978] 1980; Selinger, 2003). In case people conceive of themselves as part of the opposition, this furthermore implies the capacity to formulate alternative political goals. These capacities are relevant in many social contexts and situations in everyday as well as professional life or in civil society organizations but also for the capacity of a lay public or individual laypersons to participate as speakers in an experts discussion “and [to] confront the alleged truth of the discourse that justifies [certain] practices” (Larson, 1990: 37). At the same time, and quite apart from the mechanisms of exclusion and inclusion that are always bound up with different educational levels, the incapacity to deal with knowledge is increasingly interpreted as a sign of personal failure.
* **The *capacity to consider multiple (and probably conflicting) perspectives***.[[8]](#footnote-8) The capacity to engage in networking in order to explore, test, enhance different perspectives or reconcile competing ones, e.g. in the fields of political discourse, investment and health behavior or collective action, but also to cope with other common or uncommon problems is defined by the cognitive skill to establish and defend a position, to convince others, to make decisions (see Choi et al., 2014) and to clarify the merits of one’s own perspective or decision. The capacity to articulate, aggregate and, if need be, integrate multiple perspectives (“integrative complexity” [cf. Tetlock, 2002]) includes the capacity to make use of the “distributed knowledge” (Hayek, [1945] 1996: 77) in a society.[[9]](#footnote-9) In the field of political action it includes, for instance, the capacity “to coordinate many discrete bodies of knowledge, diversely distributed across the political community” (Fuerstein, 2008: 78) rather than the comprehensive grasp of the knowledge of an entire scientific field.[[10]](#footnote-10) This feature of knowledgeability ultimately extends to the capacity to integrate the multiple political views that coexist in a democracy into one’s own mental horizon and, at the same time, to tolerate contradictory ideas.[[11]](#footnote-11)
* **The *capacity to mobilize resistance***: This is an important component of the stratification potential of knowledge (see Essed, 1991). The capacity to criticize the practices of experts, the state or the corporations and to call them to account, for example, is an important (positive) factor of the capacity of knowledge to create opportunities for participation. Examples in this context are, for instance, the moralization of the markets (Stehr, 2007) or the knowledgeability-driven capacity to use political consciousness as a means of monitoring those in power.
* **The *capacity to avoid or exclude something*** by strengthening the resilience and resistance of an actor, household or business concern. The capacity to avoid something is another stratifying characteristic of individuals and collectives, to be mobilized on the basis of different knowledge skills (cf. e.g. Gustman, Alan L., Thomas L. Steinmeier and Nahid Tabatabei, 2012).[[12]](#footnote-12) What is meant by this are strategies to make sure that some of the risks of modern society – in the context of, for instance, general safety, confrontation with conflicts or violence, health hazards, psychological resilience as well as the capacity to cope with failure - are unequally distributed. At the same time, the enormous growth of the “informal economy” in a majority of developed societies, i.e. all those – legal and illegal – types and forms of economic transactions that are not controlled by the state or the judiciary, might turn out to be the result of the stratification capacity of knowledge.
* **The *capacity to generate novel and convincing ideas*** or views[[13]](#footnote-13) that due to their persuasive power alone and without recourse to power resources might, for instance, make it to the political agenda.[[14]](#footnote-14) Whether such ideas really have to be “new” in order to be influential is an empirical question for as Albert Hirschman (1991:29) impishly notes, “almost any idea that has not been around for a while stands a good chance of being mistaken for an original thought.”

Overall, the cluster of knowledge-based competences opens up access to resources for action that enable people to more or less directly master their lives (achieve the “good life”) [[15]](#footnote-15) , persist, be proactive, be innovative, mobilize skills, assume responsibility, for instance for their health (e.g. in terms of life expectancy),[[16]](#footnote-16) financial status, personal lifestyle, career opportunities, long-term material securities, community life, etc., or the capacity to seek out expertise for solving these tasks and, thus, facilitating a reflective and socially differentiated dealing with relevant forms of knowledge. Knowledge skills are enabling resources that not unlike “culture” leave much opportunity for choice and variation (see DiMaggio, 1997:265).

The capacities to mobilize resistance, make use of discretion, organize protection, mobilize knowledge about knowledge, to be effectual on the labor market (cf. Deming, 2015) or develop novel and convincing ideas and make decisions are of course important elements of these tactics and strategies. They essentially contribute to the formation of an independent, valuable consciousness (*internal efficacy*) that enables individuals to actually master social and political situations, i.e. to not fall victim to or let themselves be determined by random circumstances, and - provided they have appropriate notions and ideas - perhaps even to change societal conditions (*external efficacy*).

The growing knowledgeability or cluster of knowledge-based skills and values, as described by me, that characterizes actors in moderns societies is the basis for an increasing tendency towards *self-organization* in small groups of actors in various social roles – such as, for instance, workers, consumers, voters, tourists, students or politically active citizens. Knowledgeability strengthens the capacity of actors to reflectively and independently deal with political issues. Knowledgeability, therefore, describes the individual and collective capacity to not only generate an idea but to implement it, as well – and to do so not only under action conditions that are largely free of the influence or the “manipulations” of others (Stigler, 1978: 214). Simply put, the higher the appreciation and the wider the distribution, in a society, of the cluster of capacities that make up knowledgeability the better the chances for - and the higher the sustainability of - democracy.

Neither *knowledge* as the capacity to act nor *information* about the characteristics of persons or objects come with concrete indications on how to assess on what basis the relevance or appropriateness of knowledge and information (practical knowledge), indications of what to do (performative knowledge), let alone how to translate insights to practice (enacted knowledge). Thus, due to the diagnosis of the state of affairs they imply (for example, “it’s the very basis of social inequality that is wrongful”), *ideas* have the singular capacity to suggest goals and mobilize for action. At their core, ideas constitute a call to action.[[17]](#footnote-17)

**Literature**

Adolf, Marian and Nico Stehr (2014), *Knowledge*. London: Routledge.

Aunger, Robert und Valerie Curtis (2013), “The anatomy of motivation: An evolutionary-ecological approach,” *Biological Theory* 8:49-63.

Beck, Ulrich (1986), *Risikogesellschaft*. Auf dem Weg in eine andere Moderne. Frankfurt am Main: Suhrkamp.

Bell, Daniel (1973) *The Coming of Post-Industrial Society*. A Venture in Social Forecasting. New York: Basic Books.

Böhme, Gernot und Nico Stehr (1986),"The growing impact of scientific knowledge on social relations." S. 7-29 in Gernot Böhme and Nico Stehr (eds.), *The Knowledge Society***.** Dordrecht and Boston: D. Reidel.

Bourdieu, Pierre (1975), "The specificity of the scientific field and the social conditions of the progress of reason”, *Social Science Information* 14: 19-47.

Castells, Manuel (1996), *The Rise of Network Society*. Oxford: Blackwell.

Choi, Syngjoo, Shachar Kariv, Wieland Müller und Dan Silverman (2014), “Who is (more) rational:,” *American Economic Review* 104:1518-1550.

Ciccone, Antonio und Elias Papaioannou (2009), “Human capital. The structure of production, and growth,” *The Review of Economics and Statistics* 91:66-82.

Deming, David J. (2015), “The growing importance of social skills in the labor market,” *NBER Workling Paper* 21473. [www.nber.org/papers/w21473](http://www.nber.org/papers/w21473)

DiMaggio, Paul (1997), “Culture and cognition,” *Annual Review of Sociology* 23: 263-287.

Dosi, Giovanni and Luigi Marengo (2014), “The dynamics of organizational structures and performances under diverging distributions of knowledge and different power structures,” *Journal of Institutional Economics* Published online 06 June 2014.

Elias, Norbert (1987), „The retreat of sociologist into the present,“ *Theory, Culture & Society* 4:223-247.

Essed, Philomena (1991), „Knowledge and resistance: black women talk about racism in the Netherlands and the USA,“ *Feminism & Psychology* 1:201-219.

Feyerabend, Paul ([1978] 1980), *Erkenntnis für freie Menschen*. Veränderte Ausgabe. Frankfurt am Main: Suhrkamp.

Florida, Richard (2002), *The Rise of the Creative Class*. New York: Basic Books.

Fuerstein, Michael (2008), „Epistemic democracy and the social character of knowledge,“ *Episteme* 5:74-93.

Garicano, Luis and Esteban Rossi-Hansberg (2015), “Knowledge-based hierarchies: Using organizations to understand the economy,” *Annual Review of Economics* 7: 1-30.

Gustman, Alan L., Thomas L. Steinmeier, and Nahid Tabatabai (2012), "Financial Knowledge and Financial Literacy at the Household Level." *American Economic Review*, 102: 309-13.

Hayek, Friedrich ([1945] 1996) *Individualism and Economic Order*, Chicago: University of Chicago Press.

Hirschman, Albert O. (1991), *The Rhetoric of Reaction*. Perversity, Futility, Jeopardy. Cambridge: Harvard University Press.

Hirschman, Albert O. (1989), “Having opinions – one of the elements of well being?,” *The American Economic Review* 79:75-79.

Jensen, Michael C. and William H. Meckling (1992), “Specific and general knowledge, and organizational structure,” pp. 251-274 in Lars Werin (ed.), *Contract Economics*. Oxford: Blackwell.

Jessoe, Katrina und David Rapson (2014), “Knowledge is (Less) Power: Experimental Evidence from Residential Energy Use,” *American Economic Review* 104:1417-1438.

Kautz, Tim, James J. Heckman, Ron Dirks, Bas ter Weel and Lex Borghans, (2014), “Fostering and measuring skills: Improving cognitive and non-cognitive skills to promote lifetime success,” *NBER Working Paper* 20749

Keller, Wolfgang, and Stephen Ross Yeaple. 2013. "The gravity of knowledge," *American Economic Review*, 103: 1414-44.

Khan, B. Zorina (2015), „Knowledge, human capital and economic development: Evidence from the British industrial revolution 1750 1930,“ NBER Paper 20853

Klapper, Leora F., Annamaria Lusardi and Georgios A. Panos (2012), “Financial literarcy and the financial crisis,” NBER Working Paper Series, Working Paper 17930 http://www.nber.org/papers/w17930

Koestner, Robert und Kevin Callison (2011), “Adolescent cognitive and noncognitive correlates of adult health,” *Journal of Human Capital* 5:29-69.

Kreibich, Rolf (1986), *Die Wissenschaftsgesellschaft*. Von Galilei zur High-Tech-Revolution. Frankfurt am Main: Suhrkamp.

Larson, Magali Sarfatti (1990), “In the matter of experts and professionals, or how impossible it is to leave nothing unsaid,“ S. 24-50 in Rolf Torstendahl and Michael Burrage (Hg.), *The Formation of Professions*. Knowledge, State and Strategy. London: Sage.

Luckmann, Thomas ([1982] 2002), „Individuelles Handeln und gesellschaftliches Wissen,“ S. 69-89 in Thomas Luckmann, *Wissen und Gesellschaft*. Ausgewählte Aufsätze 1981-2002. Konstanz: UVK.

Mattelart, Armand ([2001]2003), *The Information Society*. London: Sage Publications.

Mills, C. Wright (1959), *The Sociological Imagination*. New York: Oxford University Press.

Mokyr, Joel (2005), “The inellectual origins of modern economic growth,” *The Journal of Economic History* 65:285-351.

Nussbaum, Matha C. (2000), *Women and Human Development*. The Capabilities Approach. Cambridge: Cambridge University Press.

Nye, Joseph S. Jr. (1990), *Bound to Lead*. The Changing Nature of American Power. New York: Basisc Books.

Phelps, Edmund S. (2015), “What is wring with the West’s economies?,” *New York Review of Books* August. www.nybooks.com/articles/archives/2015/aug/13/what-wrong-wests-economies/

Prada, María F. and Sergio S. Urzúa (2014), “One Size does not Fit All Multiple Dimensions of Ability College Attendance and Wages,” *NBER Working Paper* 20752.

Rittel, Horst W.J. und Melvin M. Webber (1973), “Dilemmas in a general theory of planning,” *Policy Sciences* 4”155-169.

Sachs, Jeffrey and Laurence J. Kotlikoff (2012), “Smart machines and long-term misery, *NBER Working Paper* 18629.

Sariaslan, Amir, Henrik Larsson, Brian D'Onofrio, Niklas Långström and Paul Lichtenstein (2014), “Childhood family income, adolescent violent criminality and substance misuse: quasi-experimental total population study,” *British Journal of Psychiatry* (published online, August 21, .10.1192/bjp.bp.113.136200).

Selinger, Evan M. (2003), “Feyerabend’s democratic critique of expertise,” *Critical Review* 15:359-373.

Sen, Amartya (2002), *Rationality and Freedom*. Cambridge, Massachusetts: Belknap Press of Harvard University Press.

Sen, Amartya (1992), *Inequality Reexamined*. Cambridge: Harvard University Press.

Sen, Amartya (1984), *Resources, Values and Development*. Oxford: Basil Blackwell.

Simmel, Georg ([1907] 1989), *Philosophy of Money.* London: Routledge.

Stehr, Nico (2007), *Moralisierung der Märkte*. Frankfurt am Main: Suhrkamp.

Stehr, Nico (2005), ““Noch ist ist nichts entschieden: Die Chancen und Risiken der möglichen Globalisierung,” S. 35-52 in Endre Kiss (ed.), *Postmoderne und/oder Rationalität*. Szekesfehervar: Kodolányi-János Hochschule.

Stehr, Nico (2003), *Wissenspolitik*. Die Überwachung des Wissens. Frankfurt am Main: Suhrkamp. (English: Nico Stehr [2005], *Knowlege Politics*. Governing the Consequenecs of Science and Technology. Boulder and London: Paradigm Publishers.)

Stehr, Nico (2001), *Wissen und Wirtschaften: Die gesellschaftlichen Grundlagen der modernen Ökonomie*.Frankfurt am Main: Suhrkamp, 2001 (English: Nico Stehr [2002], *Knowledge and Economic Conduct*. The Social Foundations of the Modern Economy. Toronto: University of Toronto Press.)

Stehr, Nico (1994), *Arbeit, Eigentum und Wissen*. Zur Theorie von Wissensgesellschaften. Frankfurt am Main: Suhrkamp.

Stehr, Nico und Marion Adolf (2015), *Ist Wissen Macht?* Erkenntnisse über Wissen. Weilerswist: Velbrueck Wissenschaft.

Stevenson, Hayley und John S. Dryzek (2012), „The discursive democratisation of global climate governance,“ *Environmental Politics* 21:189-210.

Stigler, George J. (1978), “Wealth and possibly liberty,” *Journal of Legal Studies* 7:213-217.

Stiglitz, Joseph und Bruce C. Greenwald (2014), *Creating a Learning Society*. A New Approach to Growth, Development, and Social Progress. New York: Columbia University Press.

Terranova, Tiziana (2000), “Free labor: Producing culture for the digital economy.” *Social Text* 18: 33 – 58.

Tetlock, Philip E. (2002), ‘‘Social-Functionalist Frameworks for Judgment and Choice: The Intuitive Politician, Theologian, and Prosecutor,” *Psychological* *Review* 109: 451-472.

Walker, Melanie (2008), “Widening participation; widening capability,” *London Review of Education* 6:267–279.

1. Obwohl ich dieser Problematik keinen Forschungs- und Theorievorrang gebe, ist es sicherlich nicht auszuklammern, dass diese Fähigkeiten illegitimen gesellschaftlichen Zielen dienen mögen. [↑](#footnote-ref-1)
2. For *knowledge skills* as a possible equivalent of *knowledgeability* since the concept implies a reference to the preconditions for creating knowledge, see Aunger and Curtis (2013: 52, 54), among others. [↑](#footnote-ref-2)
3. For a relevant definition and distinction of the core terms of „ínformation“ and „knowledge“ see Adolf and Stehr (2014). [↑](#footnote-ref-3)
4. Research into the role of human capital in economic processes (e.g. economic growth, international specialization, technology adoption or the structure of production) arrives at rather mixed or even contentions results. [↑](#footnote-ref-4)
5. Heinrich Popitz (1986: 121) suggests that the most meaningful definition of intelligence is the social and cognitive ability to engage in detour action. [↑](#footnote-ref-5)
6. See Sergei Guriev and Daniel Treisman, „The new dictators rule by velvet fist,“ *New Yoyk Times* 24. Mai 2015 <http://nyti.ms/1KtbPYo> [↑](#footnote-ref-6)
7. Amartya Sen (1992: 5) lists a range of quite different goals that are determined by an individual’s capacities to achieve them: “The functionings included can vary from the most elementary one, such as being well-nourished, avoiding escapable morbidity and premature mortality, etc., to quite complex and sophisticated achievements, such as having self-respect, being able to take part in the life oft he community, and so on.” [↑](#footnote-ref-7)
8. C. Wright Mills’ (1959: 7) definition of “sociological imagination” is a quite accurate description of this knowledge skill: “The sociological imagination is the capacity to shift from one perspective to another – from the political to the psychological; from examination of a single family to comparative assessment of the national budgets of the world; from the theological school to the military establishment; from consideration of an oil industry to studies of contemporary poetry. It is the capacity to range from the most impersonal and remote transformations to the most intimate features of the human self – and to see the relations between the two.” [↑](#footnote-ref-8)
9. Friedrich Hayek’s ([1945] 1976: 77-78) classical formulation of the concept of *division of knowledge* directly applies only to the knowledge distributed among economic actors in markets: ”The peculiar character of the problem of a rational economic order is determined precisely by the fact that the knowledge of the circumstances of which we must make use never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess. The economic problem of society is thus … a problem of the utilization of knowledge which is not given to anyone in its totality.” But there can be no doubt that the problem of the division of knowledge is a problem for society as a whole and offers a possible solution for the issue of what makes up the difference between knowledge and ignorance (cf. Stehr 2012a). [↑](#footnote-ref-9)
10. Hayley Stevenson and John Dryzek (2012: 192) construe the concepts of reflexive modernization, or reflexive traditionalization, as a manifestation of the capacity to recognize alternative discourses: “Reflexive modernisation and reflexive traditionalisation alike mean space opens up for the configuration of discourses to be influenced by reflective choices of competent agents, simply as the result of enhanced awareness of alternative discourses. To the extent this capacity becomes dispersed and inclusive, there is potentially good news for democracy.” [↑](#footnote-ref-10)
11. The capacity to tolerate multiple conflicting points of view has a considerable affinity with John Rawls’ (1997: 766) concept of public reason: In a democratic society “citizens realize that they cannot reach agreement or even approach mutual understanding on the basis of their irreconcilable comprehensive doctrines. In view of this, they need to consider what kinds of reasons they may reasonably give to one another when fundamental political questions are at stake. I propose that in public reason comprehensive doctrines of truth or right be replaced by an idea of the politically reasonable addressed to citizens as citizens.” [↑](#footnote-ref-11)
12. See also Sariaslan, Amir, Henrik Larsson, Brian D’Onofrio, Niklas Långström and Paul Lichtenstein (2014). [↑](#footnote-ref-12)
13. Joseph Nye (1990) describes the capacity to generate novel and convincing ideas that might make it to the political agenda as a form of *soft power*. On the whole, the characteristics of “soft power” also apply to key attributes of the various forms of knowledgeability. [↑](#footnote-ref-13)
14. The capacity of knowledgeability to generate novel and convincing ideas or views has a ”low” affinity with the economic function of the knowledgeability attributed to the members of the “creative class” in Richard Florida’s study *The Rise of the Creative Class* (2002). Besides the professions of its super-creative core of scientists, university professors, poet and architects, the creative class also includes a group of various professions that “engage in creative problem-solving, drawing on complex bodies of knowledge to solve specific problems”; the members of the professions group “are required to … regularly … think on their own” (Florida, 2000: 69). [↑](#footnote-ref-14)
15. In a contribution to *New York Review of Books* the economist Edmund S, Phelps defines the term the of the good life as follows: „ The good life … involves acquiring mastery in one’s work, thus gaining for oneself better terms—or means to rewards, whether material, like wealth, or nonmaterial—an experience we may call ‘prospering’. As humanists and philosophers have conceived it, the good life involves using one’s imagination, exercising one’s creativity, taking fascinating journeys into the unknown, and acting on the world—an experience I call ‘flourishing’. These gains are gains in experience, not in material reward, though material gains may be a means to the nonmaterial ends.” [↑](#footnote-ref-15)
16. Based on a comprehensive American panel study on the correlation between various individual and family traits, and more specifically on the association of cognitive and non-cognitive traits of adolescent respondents (age 14 and 15) with the health of these respondents in adulthood (age 41), Koestner and Callison (2011: 63) conclude that “cognitive ability and self-esteem have significant, direct associations with adult health.” An earlier British study found an even higher correlation between cognitive abilities and health in later years (see Carneiro et al., 2007). Cognitive abilities were measured with the *Armed Forces Qualification Tests* (AFQT). The test measures word knowledge, text comprehension, arithmetic reasoning and mathematical knowledge. Koestner and Callison (2011: 64) also ask whether “adolescent cognitive and noncognitive factors are potential explanations of gender and racial disparities in health. Overall, we found little evidence that these factors can explain much of the differences in health we observe between men and women and black and white persons.” Differences found by the authors explained only a small part of the standard deviation in the difference between black and white persons. [↑](#footnote-ref-16)
17. In the context of discussions about ways to measure the quality of life with the help of traditional economic (GDP) indicators, Albert Hirschman (1989) asks whether “having an opinion” is a good that should be included in the measure for a country’s quality of life. Couched in economic terms, Hirschman’s (1989: 77) own view in this matter is as follows: “[T]he forming and acquiring of opinions yields considerable utility to the individual. At the same time, if carried beyond some point, the process has dangerous side effects – it is hazardous for the functioning and stability of the democratic order. Under present cultural values these side effects do not enter the individual calculus – they are like external diseconomies.” [↑](#footnote-ref-17)