Social Work as an Action Science: A Perspective From Europe

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Abstract

It is a surprising fact that social work is not conceived as a scientific discipline in many countries and especially in the United States. It is surprising because the extent of academic social work programs and the scientific output of people working at schools of social work are significant. And it is surprising anyway if social work is conceived as a profession that by definition is linked to scientific knowledge. This article presents a characterization of the debate on social work science that has been led in the German-speaking countries. As a consequence of this debate and following the philosophy of science as developed by Mario Bunge, it introduces some basic propositions on how to conceive social work as a science, namely as a transdisciplinary action science (*Handlungswissenschaft*)[1] and outlines the target of building a consolidated knowledge base of social work as well as the challenges related to this goal.

Social Work as an "Action Science" (*Handlungswissenschaft*): A Perspective from Europe[2]

Against the customs of writing a scientific text, I begin on a personal note. Some sentences characterizing the situation of social work science in the United States from John Brekke's article "Shaping a Science of Social Work" and from Katharine Briar-Lawson constituted a big surprise for me. Brekke (2012, p. 456) says: "It is clear that social work has not engaged in this process of self-definition as a science." And Briar-Lawson (2012, p. 527) asks: "While the issue at hand is one of building a science of and for social work, the question remains, how do we get there?". For me, it was always unquestioned and unquestionable that social work in the United States would be a science, given the institutional place of the schools of social work at universities with their long and sometimes glorious traditions and given the abundance and quality of scientific articles on social work by American authors. The question begs to be asked: What did you do for a 100 years at university if it was not scientific work? And how can it be that there are high-level social work research articles if there is no science of social work?

Brekke (2012, p. 456) provides an answer to these questions when he describes the scientific development of social work as a "piggyback approach", whereby knowledge is "embraced" from a broad range of disciplines with scientists from these disciplines included in the schools of social work. In the German context, the experience is that their perspectives are not necessarily a social work perspective, despite the development of a

social work identity for some of them over time. Often, results are published in their respective disciplinary journals and not in social work journals. If we would count these authors as social work scientists, the scientific impact of social work in the social sciences would be much greater than when merely comparing the number of journals of different disciplines as Brekke did. But given this peculiar structure, the delivered scientific performance is not recognized and attributed to social work science, and worse, this structure does not lead to a solid scientific knowledge base for social work practice. This last thesis is central to my article. The answer to the question of how to attain a "science of and for social work" as posed by Briar-Lawson above is closely linked, in my view, to the question of what is necessary for the construction of such a knowledge base for the profession. One of the main challenges in this respect is how to transform a multidisciplinary and structurally fragmented body of scientific work and its resultant fragmented knowledge base (the last 100 years?) to a transdisciplinary and structurally integrated scientific work and disciplinary knowledge base of social work (the next 100 years?).

Social work is not a scientific discipline or has not been such for long in many countries—for example, the United States, the

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German-speaking countries, France, and Italy—and this interesting phenomenon should be an object for comparative historical studies in social work. And when there is a movement to found such a discipline, the endeavor usually, at least in my experience, is contested from many sides. There must be reasons for this, because on the level of the social system of science, the usual if not the only form to organize scientific work is by defining and founding a discipline. To my knowledge, social work is the only exception to this, which is even more striking when the proliferance of academic teachers, academic programs, and research done in schools of social work and the extension of professional social work around the world is taken into consideration. Furthermore, the criteria for founding new disciplines are low level: The field of study must be distinctive and the formal criteria of scientific work (which are finally very broad in general and even pluralistic these days) have to be adopted and executed by a (possibly small) number of people who adhere to that discipline. Furthermore, the last two centuries are marked by the development of the professions as central collective actors of modern societies. Because professional action is by definition and its very nature coupled with *values and knowledge*, all professions have coevolved with a closely related scientific discipline. Medical science is probably the most successful example of such a scientific discipline with a very tight and strong coupling between science and practice. Successful in the sense that medical science has built an impressive knowledge base integrating knowledge from various disciplines for professional action. By the way, medical treatment deals with human beings (as does social work) not with material objects like engineering sciences. With this simple analogy to medicine and the professions with their related scientific disciplines in general, I want to highlight that there are models for shaping the discipline of social work available that have proven of value. Furthermore, these models are clearly described by the basic philosophy of science which establishes their scientific legitimacy beyond discussion.

During the 1990s (and currently still progressing), there was a significant debate in the German language on the issue of conceiving social work as a science (Birgmeier & Mührel, 2009, 2013; Engelke, 1992; Mühlum, 1998, 2004; Obrecht, 1996; Rauschenbach, 1991; Sommerfeld, 1996; Staub-Bernasconi, 1994; Wendt, 1994). As far as I can see, there are many parallels to the debate now ongoing in the English language (especially in the United States), but there are also some structural differences. A systematic comparison would be an excellent PhD topic. I personally will not volunteer for this work nor will I reiterate this older German debate in detail here. But my position, my answers to the basic questions as formulated previously by Briar-Lawson, which I explore in this article, have in fact been developed in close relation to this debate. Therefore, in a first section, I will characterize this debate as part of an emancipatory identity building process of social work, a profession historically shaped by gender. Emancipation therefore seems to suit.[3]

Of course, a debate that is not just a scientific debate but structured by a deep cultural transformation process including identity building incorporates multitudinous personal involvements and becomes somehow mixed up over time. At least for the German debate, it can be stated that it became difficult to clearly distinguish matter from personal or institutional interests (Kessl & Otto, 2012). In such a situation, it seemed to be useful to step back for a moment and return to basics in order to answer basic questions. There are two relevant fields of knowledge appropriate for this search for answers: philosophical anthropology, represented mostly by the work of Plessner (1976, 2003) and the philosophy of science mostly as articulated by Mario Bunge (1985). Therefore, a second section will indeed go back to really basic questions (what is human knowledge? What is science?), before these insights are applied to social work. The answer to what shape social work as a science has is surprisingly simple when approached from a general perspective of the philosophy of science. Thus, in a third section, social work will be introduced as an "action science" (as an "applied science" in an older but still common terminology).

A fourth section pleads for the *necessity* to adopt this direction because it is the most promising way to achieve a solid knowledge base for professional action. The concept of an action science has the potential of building a "knowledge culture" in social work which is a necessary foundation for "relevating"[4] scientific knowledge in practice and for constructing professional identities. A reflection on this topic delivers some interesting hints on the transdisciplinary challenges that lie ahead of us and on the consequences that this might have on the relation between science and professional action in social work. Some final thoughts on innovation in social work illustrate how the coupling of science and practice of social work can be conceived, namely as a cooperative endeavor.

Characterizing the German Debate on "*Sozialarbeitswissenschaft*" (Social Work Science)

With the notion "social work science" an "independent" or "autonomous" discipline was explicitly claimed by almost all the debate's contributors (Engelke 1992; Mühlum 1998; Sommerfeld, 1996; Staub-Bernasconi, 1994; Wendt, 1995). Why did the authors emphasize autonomy or independence? Can there be a nonautonomous discipline? A scientific discipline is, in any case, autonomous and independent, as soon as it is recognized and established. The emphasis signals that at that time, there was no such a thing as a discipline of social work or if there was, it was neither independent nor autonomous. The emphasis signals an urge for a change. It signals, in my interpretation, an emancipatory process. The question is emancipation from what and what for?

A first strand greatly resembles what Brekke describes as the "piggyback approach" cited previously. Engelke (1996) criticized the "patchwork" structure of social work education at the universities of applied sciences (UAS) in Germany. He raised the topic of the identity of social work. How could such an identity of the subject (social work) as well as of the students

be developed through a more or less convincing or arbitrary addition of knowledge from other disciplines like for example sociology, psychology, medicine, law, and so forth? He posited there had to be a kind of gravitation center to select and integrate this disciplinary knowledge, which had to be "social work science." Engelke focused on the part of the debate, arguing how to shape social work education. By introducing the identity issue, emancipation with regard to the other disciplines relevant to social work became part of the overall debate.

A second and third strand of the German debate are specific features rooted in a search to clarify the relation between social work and social pedagogy and the institutional place, where social work science is located. Historically, in German-speaking countries, social work and social pedagogy were two distinct lines of development: social pedagogy traditionally coming from child and youth work with its institutional center of residential care (*Heimerziehung*) on one hand and social work coming from work on poverty and related social security matters (*staatliche Fürsorge*) on the other hand. Along with this distinction, social pedagogy was conceived as being part of the educational sciences and had therefore been established at the universities for a long time, whereas social work was not. In the 1970s, the so-called universities of applied sciences (UAS) were founded in Germany (Switzerland and Austria followed in the late 1990s). The German UASs were mere teaching universities, and social work and social pedagogy were taught at this somehow lower academic level. The Swiss and to my knowledge also the Austrian UASs were founded in another spirit, research being a constitutive part of institutional tasks as defined by law. During its development in the 1960s, 1970s, and 1980s, social pedagogy at the universities had widened its perspective and research fields beyond the traditional understanding of its origins. In fact, social pedagogy at the German-speaking universities has included social work in all its aspects. For a while and still today, *Soziale Arbeit* therefore has become the integrative term including social pedagogy and social work (*Sozialarbeit*). But with the debate on a social work science, the distinctions between social pedagogy and social work had to be reexamined, complicated by the institutional differences together with differences in status between universities and UAS. So the debate was also a debate on the emancipation of the UAS as full academic universities. And it was a debate on emancipating social work from being a subdiscipline of educational sciences for systematic reasons. In the end, it is a question of what is general and what is specific. Education is not broad or general enough to include social work and vice versa education can be thought of as a part of social work. But because of historically grown structures, the debate at this point became gridlocked.

A final fourth strand of the debate covered fundamental epistemological questions on form and structure of a social work science. While legitimacy of social pedagogy as a subdiscipline of educational science was quasi given by simple institutional belonging, this question was essential for the substantiation of an independent and autonomous social work science. This part of the debate was on the emancipation of social work as a full academic discipline.

Basic Propositions: On Human Knowledge and Science

Leading on from this last point, this section concentrates on how to describe the substance of a full academic discipline of social work. In order to give substantial answers, it seems appropriate to make the fundamental premises as explicit as possible. Therefore, before coming to the philosophy of science and its application to social work, some very basic propositions on human epistemology are recounted (for a very similar approach, see Kron, 1999).

Plessner's (1976) philosophical anthropology posits that humans as humans have to create a relation to the world which he differentiates into the material environment (*Umwelt*), the social environment (*Mitwelt*), and the physical and psychic inner world (*Innenwelt*). In these processes of being in the world and nevertheless having to create a relation to the world, knowledge is gained and constitutes the means to shape these relations. Thus, once knowledge is created, it structures the relation to the worlds (material, social, and psychic). With the notion of *creating* a relation to the world through knowledge, the whole problematic of human knowledge comes at sight. Knowledge is not just there but arises from an active quarrel with the existing (*daseienden*) world (cf. Piaget's (1974) "genetic epistemology"). This search for understanding is an existential human characteristic to ensure survival in a given environment. This specific human form of being by creating an epistemic relation to the world creates possibilities to form the environment. The given environment is not just given for humans but can be shaped along the understanding of the world. Concurrently, problems arise that have to be treated through action. Problem solving is in fact the main driver of human knowledge production. Every individual has to learn how the world works. This learning process is fundamentally shaped by sociocultural structures. Socialization is the common notion in respect to an individual's developmental course in sociocultural conditions (Hurrelmann, 2002). In this respect, knowledge is culturally transmitted and individually construed. And because creation of the relation to the world through knowledge is not immediate but mediated by these constructive processes and its social and cultural framings, the frontier between truth and error or lie is not clearly evident.

To avoid misunderstanding or ambiguity at this point and despite the problematic of human cognitive capacity described previously, I have to highlight that the epistemological position I take on the basis of these foundational propositions is neither constructionism nor relativism but scientific realism. The starting point is the world that is there, not the human construction on that world or beyond that world. The perceptual mechanisms developed in a long history of evolution constitute the precondition for the creation of the relations to the world and are part of that world. The knowledge creation is not free but bound by reality, by the nature of human beings, and the experiences made with this reality. Being in the world as a natural being—following Plessner—is the one side of the "conditio humana." The other side is that these natural beings by the virtue of their

cognitive capacities have to create a knowing relation to these different experiences they make on different ontological levels. By trying to understand and to explain experience, knowledge is created and then socioculturally labeled and transmitted. In the perspective of human evolution, the sociocultural systems serve survival in this existing world, but they are narrowing the perspective which does not mean that perception and the attempts to understand the experiences could be controlled this way. This very short statement on the epistemological position is totally in line with the "realist theory of empirical testing" and the argument on which this theory has been built by Hunt (1994).

Back to the argument started previously, namely that this human condition of building a knowing relation to the world opens the possibility and the necessity to form the living conditions of human beings: Aristotle, when reflecting on human nature, nominates "practical reason" as a central characteristic of human beings (Aristoteles, 2012, p. I.7). Nussbaum (1999, p. 59ff/124ff), building her capability approach on Aristotle, defines practical reason together with "affiliation" the two central "architectonic functions," that hold the whole human endeavor together. Indeed, human knowledge is deeply linked to activity or practice. The interplay of eye and hand (Plessner, 1980) together with emotional motivations for action ("pleasure principle" according to Freud, 1972 or in more sophisticated terms, the tensions deriving from needs Obrecht, 2004) build the fundament of human knowledge creation serving survival of the individual and the species. In general terms, human knowledge develops through interrelated observation of the world (including the inner world) and the forming (*Gestaltung*) of this same world in circular processes of cognition and action. In his theory of "information processing," von Weizsäcker calls this circularity *Kreisgänge* (von Weizsäcker, 1992). These "circular movements" describe how humans sustain their knowing relation to the objects and the "world." At the same time, it is a method for evaluating experience made with a certain kind of knowledge in practical contexts and, on the long run, the progress of knowledge, "because the *Kreisgang*, the circular movement of cognition, has to be processed several times, to teach us about the cohesion of the entity" (von Weizsäcker 1992, p. 29, transl. author). Thus, through these circular processes of observation, explanation, and experience, consolidated knowledge comes into being over time.

Science is the attempt to push the frontiers of the (systematically limited) human epistemological possibilities by forming a specialized social system with some few constitutive principles: The first principle is stepping out of immediate action (of being involved in action) which enables a far-reaching extension of time for observation and explanation. And this stepping out of action (and immediate involvement) constitutes a different position of observation which is the basis for scientific research. The second constitutive principle is the structuring ideal of truth. That means that all scientific work is driven by the goal of finding out what is true, finally how this world, how our world really works. This guides the development of research methodology that can be divided into two main modes

of searching for knowledge: "proof" and "discovery" (Seipel & Rieker, 2003, p. 13). Furthermore, there are a number of rules for scientific work that take into account the limitations of human epistemology. Everybody in this social system science knows these rules through socialization and education: explication of position and perspective, explicit reference to other perspectives, naming the references, explication of the path that led to the findings, explication of the research methodology, logical requirements on consistency of the argument, and so on. These rules serve a third constitutive principle which is the introduction of the discourse as the main communicative structure of a scientific community, which, as mentioned previously, is usually organized in disciplines. The discourse is a means to "socially objectivize" the knowledge, to perform these "circular movements" (*Kreisgänge*), and to finally attain a "state of the art" which I prefer to call a consolidated knowledge base of a discipline. The mode of this discourse is "critique."

As pointed out at the beginning of this section, the human form of knowledge creation is deeply rooted in the fact that humans must lead their lives, that is, form (*gestalten*) their living conditions. Petzold (2008) describes the evolution of human cultures as a dynamic resulting out of an interplay of "curiosity" and "poiesis" (forming/*gestalten*). "Poiesis" is the typical human mode of knowledge production through solving practical problems derived from daily human life. The structure of reasoning in the mode of "poiesis" is: what is to be done to resolve practical problem x? The important point is that this structure of reasoning constitutes the basic form of human knowledge creation with a particular quality that is distinct from the modes of "discovery" and "proof." Some might argue at this point that this difference in the modes of knowledge creation constitutes the difference of science and practice on the epistemological level. With American pragmatism as a specific but well-recognized approach in the theory of science (Lewis & Smith, 1980), I would argue on the contrary that this mode of reasoning must be central for sciences like educational science (Dewey, 2002) or clinical social psychology (Lewin, 1975). But at the same time, stepping out of action and involvement is a main constitutive principle of science. This paradox has to be resolved.

Beyond specific theories of science on a simple level of observation, it has to be stated that since the beginning of modern universities, "applied sciences" (in the natural sciences) or "action sciences" ("*Handlungswissenschaften*," usually linked with professions) are constitutive parts of the academic world. Their structure of reasoning is the same as in daily or professional practice but has been transferred into the social system of science, and by doing so, the structure of reasoning is transformed into a scientific practice. Medicine, as an example for an action science, works on the question: What can a physician do to help when an illness x occurs, to support the healing process, to avoid the occurrence, or at least to alleviate the symptoms or other consequences of the illness? Medicine as a scientific discipline, as well as sociology, does not operate on a practical level. But medicine as an action science, contrary

to sociology, treats practical problems (problems occurring in medical practice) that are transformed into scientific questions and worked on with scientific means. The coupling of a field of practice with a scientific discipline constitutes on one hand an important pillar in the transformation of the field of practice into a profession. Similarly, the attempt of pushing the limits of human cognition by constituting the social system of science, professions can be understood as an attempt to push the limits inherent in human, knowledge-related action by underlying this practice with scientific knowledge (Hüttemann & Sommerfeld, 2007). And on the other hand, this coupling with the field of practice constitutes an important pillar for the foundation of the scientific discipline because it delivers a distinctive field of study: the distinctive field of practice and the practical problems occurring in this field.

Thus, action sciences (applied sciences) are a common part of science. With the general philosophy of science, as developed by Mario Bunge (1985), it is surprisingly easy to determine and define what action sciences are. The first and central point has been introduced previously: Action sciences include the structure of practical reasoning into the system of science by transforming the questions of what is to be done to achieve result x, to change status y, and to form situation z into scientific, that is, cognitive problems. In doing so, theories of a special kind emerge. Bunge and for example his recipients Patry & Perrez (1982) in clinical psychology (another action science) distinguish three different types of scientific knowledge:

1. "Knowledge of facts" usually generated through research. For example, research can reveal and test the consequences of social inequality on education and individual careers.
2. "Nomological knowledge," that is, verified theories that describe and explain the relation between facts and phenomena that explain the cohesion of an entity and the underlying mechanisms, dynamics, or regularities. For example, theories can be called nomological if they describe and explain the regularity of how social inequality creates disadvantaged education by revealing or reconstructing the underlying mechanisms.[5]
3. "Technological knowledge," that is answers in the form of verified theories to the practical structure of reasoning as introduced previously. For example, technological knowledge consists of theories that make propositions of what is to be done to minimize or to maximize the effects of social inequality in terms of disadvantage in education. This last point has to be taken into consideration systematically. Technological knowledge needs to be reflected on in relation to values. In professional contexts, this is the dominant function of the code of ethics.

Thus, technologies are the particular type of scientific knowledge produced by action sciences (applied sciences). Technologies that Silvia Staub-Bernasconi, the grand dame

of Swiss social work, calls "action theories" (Staub-Bernasconi, 2004) are theories of a special kind. They are theories on the relation between ends and means. They are theories of rational target-oriented action which every professional action should be. There are four criteria that a technology has to fulfill:

a. They are based on verified theories that explain the causal factors that lead to the emergence of a problem of concern in a field of practice,
b. the treatment has to be described and there has to be at least plausibility that this treatment affects the causal factors. Plausibility is only tolerated for a transition phase, until
c. a scientific explanation of how the treatment affects the causal factors (how the treatment works) is developed and
d. the treatment has been proved effective.

Action sciences/applied sciences differ from basic sciences in that they produce all three types of scientific knowledge, whereas basic sciences "only" have to care about knowledge of facts and nomological knowledge.

Application of the Basic Propositions on Social Work

The use of the term "technology" in the context of social work is problematic, dangerous for the reputation of the user and, at least in a German-speaking context almost like breaking a taboo (almost because in a scientific context, taboos are not legitimate, of course). There are different reasons for that. Probably, the most important ones are the association of technology with governance and power (using technology as a synonym for technocracy) and the association with emotional coldness and indifference to values or the view that self-determination of the users of social work would be offended. These are, of course, considerations that have to be taken serious. But these are considerations that have to be taken serious anyway because social work is an intervention in the autonomy of people, most of them cocitizens with the whole set of civil and human rights. There are long debates in German-speaking social work on the "double mandate" of "help and control" (starting from the contribution of Böhnisch & Lösch, 1973), reflecting on the relation of social work with governance and power as a structural component of social work. The use of knowledge and technology in technocratic ways is a danger that accompanies the history of modern societies. Social work and social work science have to be attentive to these potential dangers. The self-determination of social work users has to be respected and reflected in any way social work can be conceived as a profession. But in the very moment social work is established as a professional activity, together with the structural dangers a helping intention (values!) is institutionalized not only inside the profession as a central collective actor but also on a societal level. The overall goal and the center of the professional value base are oriented toward improving the integration and participation of vulnerable individuals and groups

and even whole populations. This means to improve the living conditions and the individual connections with society. This means to contribute to the development of a "good life" in the sense of Aristotle and his followers Nussbaum/Sen (Nussbaum 1999; Sen, 1993) or at least to a "better life," to a "more succeeding daily life" (*gelingenderer Alltag*) as Hans Thiersch, one of the most prominent thinkers of German social work and my teacher, puts it (Thiersch, 1997).

These overall goals define in a fundamental way the technological structure and the structure of reasoning for social work in general and for social work science because, once again, technologies are theories on the relations between ends and means. Values therefore are not out of technological reasoning but, in contrast, constitute its very foundations. Analogous to the technological structure of reasoning that was formulated for medical science above, for social work, it can be formulated: What can a social worker (or a social work organization) do to help when the conduct of life (*Lebensführung*, see Sommerfeld, Hollenstein, & Calzaferri, 2011) of a person or of groups or whole populations is affected by disintegration and underprivileged participation in society accompanied or caused by psychosocial distress, to support the coping process with this problematic life situation, to avoid the (re-) occurrence and—at least—to alleviate the consequences of the problematic life situation? Social work as a scientific discipline, as well as sociology and medicine, does not act in a practical sense. Nor do they prescribe what has to be done in practice. But social work as an action science, contrary to sociology, but like medicine, treats practical problems (problems occurring in social work practice) that are transformed into scientific questions and worked on with scientific means inside the social system called science.

With these propositions, the structural center of social work science can be defined in a way that makes a difference to any other scientific discipline. Again with reference to the debates in the German language, the field of study around this structural center can be described as follows: "Against the background of the central theoretical debates of the last decades it can be stated that the field of study of social pedagogy spans three corner points: (1) the competent institutions, (2) the professionals of social work and other lay or professional actors as well and (3) the users of social work" (Lüders & Rauschenbach, 2005, p. 564, transl. author). Taking into account the basic propositions defining social work as an action science and Abbott's theory of professions (Abbott, 1988), the statement of Lüders and Rauschenbach can be complemented and specified. The first corner point can be widened to the conditions shaping professional action on the level of society (jurisdiction and public) as well as on the level of the working place, that is, the social work organization. The second corner point can then be conceived not by the professionals but by the professional action and the knowledge of the profession realized in professional action. Therefore, under this second corner point, the professional techniques, treatments, procedures, and methods are of major interest as well as how in practice means end relations are conceived, as well as all the questions of effectiveness. Other professional and lay actors in the problem-solving

process are of special interest in systemic connection or in contrast to professional action executed by social workers. The third corner point, as identified by Lüders and Rauschenbach, is constituted by the users, their life conditions and their careers, their conceptions of their problems and strategies to cope with these, their capabilities and aspirations, their making use of social work (Bitzan, Bolay, & Thiersch, 2006; Schaarschuch & Oelerich, 2005),[6] and so on. In relation to the widespread conception of social work users in a perspective of "person in environment," this corner point has to include the social structure and thereby the social dimension of the genetic and causal aspects of the problems that finally make people users of social work.

This field of study comprises the whole professional and nonprofessional problem-solving process from the genesis of the real problems and their transformation into cases for social work by professional diagnosis as well as social constructions in the public, to the outcomes, and the follow-up history in a longer perspective. Hornstein, another important author in German social work, formulates this as follows:

> After all, if one tries to bring it to a single formula, the historically changing relations between individual and society under a specific, precisely pedagogic interest constitute "the problem" treated by social pedagogy. (. . .) To stress this is important because through this the studies of general social sciences are transformed into a pedagogic project (meaning a disciplinary-shaped field of study, *author*). Thus, it is a matter of the forms of socialization (*Vergesellschaftung*), of the inherent conflicts in this process, of the interest in the action and life possibilities of individuals, and finally of the forms of treatment of these crisis and conflicts by the institutions of social pedagogy. (1998, p. 69, transl. author)

Hornstein makes the central point. Many different disciplines (the social sciences in to and some other disciplines) study human beings in society from different aspects. All this multitudinous knowledge is relevant to social work because social work together with human beings in society works on their problems. The "piggyback approach" is one possible consequence of this; a logical consequence resulting if no discipline of social work is constituted. Conversely, the consequence is that there is no and never will be a consolidated knowledge base of social work resulting out of this mostly unstructured structure. There is just a highly differentiated and fragmented universe of knowledge. Only if the specific social work perspective (social pedagogy in Hornstein's citation above taken as a synonym) is put in the center, can the field of study be shaped and the horizon of knowledge can be transformed into a (hopefully consistent) knowledge base of social work. Hornstein calls this center "pedagogic interest," which in general means intervention in order to change or to influence developmental processes for the better. In the language of the general philosophy of science, as Bunge formulated it, the appropriate notion would be technology. And based on this, the discipline of social work can be defined and shaped as an action science closely coupled with the professional field and activity.

A Consolidated Knowledge Base as a Necessity for Professional Action and Innovation

Why is a consolidated knowledge base important for social work as professional action? And what would such a knowledge base look like? And how could we get there? These are the leading questions to be treated in this segment.

Professional action in a theoretical perspective is based on scientific knowledge (and values) or it is not professional. That is the short version of an answer to the first question formulated previously. If the argument in the previous chapter is correct, we do not have a consolidated knowledge base but we have a universe of scientific knowledge taught in the programs of social work. So theoretically, the education of social workers at university level ensures professionalism. But how do social workers utilize this knowledge universe learned at university? The "reflective practitioner" has been prominently discussed in German language. The "reflective practitioner" is the figure who assures professionalism in action, theoretically. With reference to the contribution of Longhofer and Floersch (2012), it seems that this figure is discussed in the American debate as well. Nevertheless, a short characterization might be useful. The concept of a "reflective professionalism" (Dewe, Ferchhoff, Scherr, & Stüwe, 2001[1992]; Dewe & Otto, 1996; Lüders, 1989) has become prominent in the context of the diagnosed problem of knowledge transfer from theory into practice.

First of all, it has to be stated here that the theory–practice gap cannot be conclusively filled. At the very moment the system of science is differentiated, there is a systematic difference. Otherwise, the differentiation would not make sense. Therefore, questions of knowledge transfer, knowledge transformation, or of knowledge integration are constitutive for action sciences and have to be worked on forever. With the figure of the "reflective practitioner," a seemingly convincing answer to the theory–practice gap can be formulated. The scientifically educated practitioner as an individual actor relates the knowledge he or she has acquired on the job (learning by doing) with the scientific knowledge acquired through education and to be acquired through searching in databases for relative information (compare the "five A's" of the evidence-based practice process: Ask, acquire, appraise, apply, adjust, EBBPCouncil@ebbp.org). Through an ongoing process of reflection of one's own practice with reference to scientific knowledge, professional practice emerges. This pleasant image puts the weight of responsibility for professionalism exclusively on the shoulders of individual practitioners. Science only has to deliver scientific knowledge in a broad sense. That is what social sciences do and that is what social work at universities does if it is not organized as a scientific discipline as conceptualized previously. The reflective practitioner therefore conveniently meets the conceptions of practicing science in the field of social work with the piggyback approach as well as with all approaches that conceive science as being completely distant to real life. What the scientific results are used for is not part of the responsibility of science.

The figure of the reflective practitioner is not really false. Longhofer and Floersch (2012, p. 512ff) show for example with reference to Margaret Archer's work, that reflection is deeply anchored in human nature. It is indeed a basic competence of human beings who have to create a relation to the world as introduced with the philosophical anthropology of Plessner mentioned previously. Reflection of experience is indeed the core of any practical reasoning. But when basing the entire question of professionalism on this concept, there are at least three considerations requiring reflection: relevance, practicability, and the social conditions of individual performance (and reflection). The whole construction only works if practitioners—and not only a few but at least the majority, if not all—recognize scientific knowledge as relevant for their daily business. And if there is a recognized relevance, the use of scientific knowledge has to be practicable under the existing conditions of daily practice. Furthermore, the model starts from individual professionals with complete abstraction from the fact that almost all professional social work is deeply formed by organizational structures and other social processes occurring at and shaping the workplace, often in a pragmatic rather than professional way.

It might be that in American social work, the relevance of scientific knowledge in practice is a given fact. As mentioned previously, in the German-speaking world, the transfer of theory into practice has been diagnosed as problematic. And the conception of a "reflective practitioner" did not change this phenomenon. There is some evidence in old and new studies on professional action in social work that scientific knowledge is not playing a significant role. If it is used at all, then in a very selective or eclectic way or in a manner that makes it truly difficult to recognize what the (scientific) origin really was (e.g., Nadai, Sommerfeld, Bühlmann, & Krattiger, 2005). If scientific knowledge is used, it often is to legitimize a certain practice on a symbolic level, but it is rarely detectable as the fundament of daily practice. To my knowledge, there are not sufficient studies to be conclusive on this matter, but there seems to be a culturally sustained cleavage between science and practice in social work questioning the relevance of scientific knowledge for practice (Sommerfeld, 2006).

If this assumption is right, there must be reasons for this. One of the reasons, I would suggest, is practicability. Practicability is a major issue and the core problem of making use of scientific knowledge in social work. This might be related to the form of the scientific knowledge available. This is because the elegant theoretical construction of the reflective practitioner that would seemingly lead out of the aporia of the theory–practice gap systematically produces an excessive if not overwhelming demand on the side of the individual actor: How should an actor in or even after the actual execution of an action be able to acquire and appraise and judge and select the "right" knowledge in that universe of scientific knowledge produced by the sciences? How should it be possible that in daily work, every individual practitioner find solutions by reflecting on unspecific multidisciplinary scientific knowledge for the problems he or she is faced

with? Does a physician need to integrate myriad interdisciplinary knowledge in order to know how to intervene when cholera rages? It seems to me that all the efforts and the boom of "translational research" (Woolf, 2008) indicate that there is a massive need to advance relevance and practicability of scientific knowledge in social work.

Furthermore, individual action, knowledge creation in action, and reflection on action are massively structured as any other individual human action socially. Observations in our studies on social work action and the formation of social work action competence led us to the theorem of "the social production of professionalism" (the model is shortly described in English in Gredig & Sommerfeld, 2008). This view on professional action suggests that organizations are the main decisive factor whether professionalism occurs or not and what form it takes when it occurs. The individual practical reasoning is shaped by biography and education. But in the immediate interaction with the clients (who are an important social factor as well), the actors develop hybrid "emotional-cognitive-action patterns" that are strongly structured by rules and beliefs that are socially constructed and transmitted in the organization. Scientific knowledge plays a role there. The extent of this influence is highly variable and depends on the culture of the organization that mostly decides if scientific knowledge is coded as relevant and how this possible reference can be used for reflection and organizational development. A current research project of ours on cooperative knowledge production (http://www.fhnw.ch/ppt/content/prj/s206-0038) clearly demonstrates that the extent of the use of scientific knowledge always depends on the degree of professional development of the organization.

All professions have to find solutions for the systematic theory–practice gap resulting from the differentiation process in terms of knowledge production. Neidhardt (1979), a German sociologist, reflected on the general question of differentiation and integration many years ago. All processes of differentiation create an integration problem. The theory–practice gap may be conceived as such an integration problem. Neidhardt's general answer to the question of how an integrated entity can be produced was that the relation between the differentiated subsystems (here: science and practice of social work) has to be structured through exchange and cooperative relationships at a "higher level." So, if it can be stated that professionalism induces a differentiation process in which practical knowledge as well as scientific knowledge is produced, and if it can be stated that in order to develop professionalism for the sake and quality of professional action, these subsystems have to be integrated productively, then three conclusions can be drawn:

> There has to be clarity about the subsystems to be integrated. It is not merely scientific knowledge that forms the counterpart of practice. Both scientific knowledge and professional action are produced in social systems. The two social systems need to be integrated. The counterpart of professional practice systematically is not just knowledge but the corresponding discipline.

The form and content of that discipline has to be shaped to enable the organization of exchange at a "higher level." As previously mentioned, the multidisciplinary "universe of knowledge" is not to be seen as the optimum because it creates an overwhelming demand on the side of practice. Technological knowledge on the other hand has the same structure of reasoning as practice (what has to be done to . . .). Therefore, it is plausible that exchange is more easily established and the content to be exchanged—knowledge—is by this homology more likely to be connected. And, even more importantly, technological knowledge is a transdisciplinary synthesis out of multidisciplinary knowledge. When searching for answers to real-life practical problems in a scientific way, complexity has to be mastered. This means that the overwhelming and finally impossible demand on the side of practice constitutes the central and challenging demand for the scientific discipline as an action science—to create a transdisciplinary consolidated knowledge base. What this means will be illustrated subsequently.

Finally, the forms of exchange and cooperation themselves have to be taken into consideration. Technically speaking, education, publication paths, translation, and forms of immediate cooperation between science and practice are of concern here. But both beyond this and yet somehow at a basic level, it has to be highlighted that integration can be attained in a completely different way if there is a culturally sustained concept of cleavage between science and practice or if there is a culturally sustained concept of unity or belonging. These propositions will be outlined subsequently as well.

As stated in the second point previously, if the purpose of social work science is to build a consolidated body of knowledge, the main challenge consists of integrating multidisciplinary knowledge in a transdisciplinary way. And—as if this task is not difficult enough—the knowledge produced in practice has to be integrated as well. As introduced previously, practical problem solving is an epistemological mode of an own quality that cannot be substituted by scientific epistemology and functioning. But this practical reasoning can be included in the scientific mode and transformed into theories of means end relations. By this process of inclusion, practical reason is transformed, refined in a specific way, and systemized. If this process is successful, a consolidated body of knowledge will develop over time, if on the other side and in circular ways of cognition and experience, the technological knowledge is practicable in the sense that practitioners use it, refer to it, and reflect on it.

Once again the practical problems form the point of crystallization for transdisciplinary integration of knowledge because the real-life complexity needs to be treated in a transdisciplinary way. There are different ontological levels involved that need to be systematically interrelated in order to create both an explanation of problem genesis and how interventions work in which contexts and under what conditions. Until now, most of the approaches to resolve the challenge of building a transdisciplinary knowledge base (again, in the German language culture) either have a vague programmatic character or are
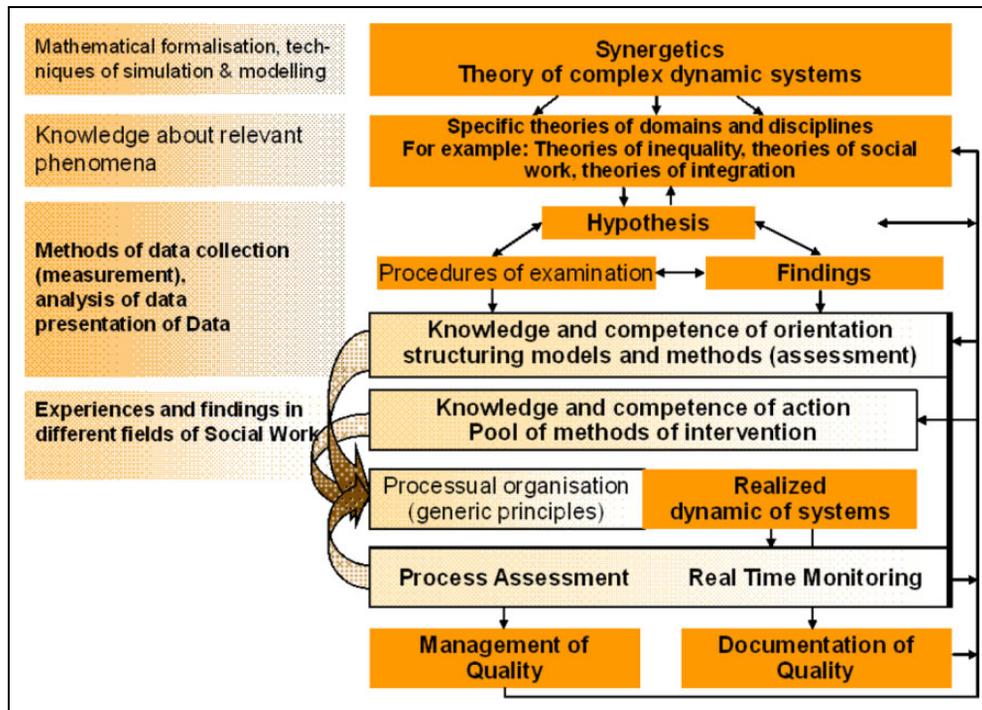
Figure 1. Transdisciplinary knowledge production in action sciences, for example social work.

problematic on a systematic level (for an overview, see Büchner, 2012). The most sophisticated approach has been presented by a Swiss colleague, Werner Obrecht, who built his model on the systemic ontology of, again, Mario Bunge (Obrecht, 2005). This model of integration of knowledge can be described as follows:

> The general structure that makes possible integration, following Obrecht, consists in a five-level disciplinary matrix of a systemic paradigm of social work. (...) In decreasing generality the five levels are ordered in the realms of meta-sciences (I), object theories (II), the general normative action theory (III), specific action theories (methods) (IV) and the reality (V). (Büchner 2012, p. 73)

The integration of knowledge is made through connections between the levels. The choice of the meta-theory (in Obrecht's case, the systemic ontology of Mario Bunge) is decisive insofar that it spans the theory horizon that allows coherence above all when different object theories of different disciplines and paradigms are connected. Levels 3 and 4 are the specific realms of action sciences. Level 4, the "specific action theories" is precisely what has been introduced previously under the term technologies. Level 3 is the basic structure of all professional action. For example, a really basic general normative action theory is that of Abbott: assessment—inference—treatment (1988). Level 5, "reality," describes the interventions as operated by professionals to attain professional goals. Obrecht (2009) has developed a "method of codification" of specific action theories in relation to the real interventions. The function of this method is to qualify professional theories for action. It aspires to the formulation of systems of rules based on

explanations of the problems to be treated, as well as explanations of the mechanisms that make an intervention effective. Rules and explanations are based on object theories synthesized under the umbrella of the chosen meta-theory.

It seems that in principle, this matrix describes the structure of transdisciplinary reasoning and knowledge production. It suggests that it is necessary to make paradigmatic choices instead of keeping everything as unstructured as possible as in the "piggyback approach." It suggests that it is necessary to use real-life problems as structuring components in the sense that they lead the choices of object theories in order to explain coherently the phenomena and mechanisms or dynamics underlying the problem and treatment. This is, by the way, a strong, perhaps the strongest, test for theories: If you can build effective interventions on theories or if these are useful in explaining effective treatments, they prove a high validity through this connection to reality.

We have developed a similar matrix. The following aims to illustrate on one hand the fundamental model of Obrecht that has inspired our variation. On the other hand, contrasting our adjusted model intends to demonstrate that inside this fundamental structure, there can be different ways to conceive the connections between levels. The codification of theories for action in our model, for example, is significantly more research based. Another difference is the choice of the meta-theoretical framework. Our model of the transdisciplinary knowledge production refers to another system theory—the so-called "synergetics" or "theory of complex dynamic systems" Haken (1990) established in physics—and to a basic model on transdisciplinary reasoning that has been developed by Günter Schiepek in clinical psychology
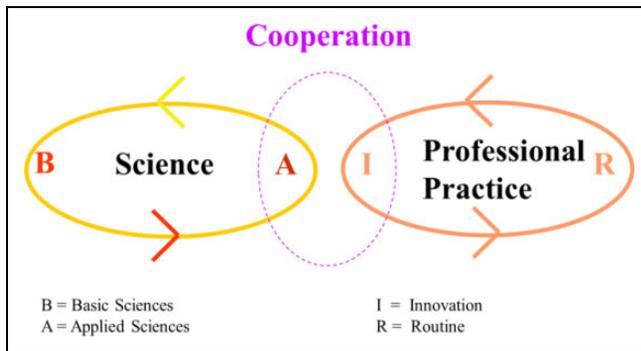
Figure 2. Cooperative knowledge production, *Source:* Sommerfeld (2000).

(Haken & Schiepek, 2010, p. 442). The model, as adapted for social work, is shown in Figure 1 (see also Sommerfeld, Calzaferri, Hollenstein, & Schiepek, 2005).

The first two levels are almost identical compared to Obrecht with the exception of the different meta-theory. The third level (general normative action theory) has been omitted because we believe this can be presupposed in a professional context. The fourth level, the specific action theories or technologies, is differentiated along the presupposed general normative action theory in knowledge (including competence) related to assessment and knowledge (including competence) related to intervention. The example of cholera mentioned earlier may serve as an illustration: Medical knowledge for action at this level provides practitioners with knowledge to perceive the problem and name it (diagnose it) as cholera and of knowledge of how to intervene when cholera has been diagnosed. This specific knowledge is in a pool with many other of the same kind. Knowledge of this kind is what a practitioner primarily has to know and reflect on in practice. He or she need not reflect on meta-theoretical issues and the connection to different possibilities to describe the phenomenon (cholera) in different object theories. This has to be done beforehand in circular processes between science and practice until a consolidated knowledge pool on the level of specific action theories is established. If this knowledge base is reliable, it can be taught and used without knowledge of all the theoretical and technological details that are in the realms of science and the basic reason for the differentiation process out of which science has emerged. Knowledge at the higher levels is nevertheless necessary to understand what one does. The "reflective practitioner" here comes into the game and shows its value for making a difference in terms of professional practice. And it might be necessary someday to go beyond the existing knowledge on the level of specific action theories and beyond routine practices, when innovation or development is needed.

The graphic introduces two other elements both of which are partially related to research. In the center of the picture, and in my view of central significance, we have the connections to be made between the basic and meta-theoretical levels on one side and the levels of action science and practice on the other. Here research and research methodology appear on the scene.

Discovery and proof, the epistemic modes science has specialized in, now have to be applied to action knowledge, to knowledge of and for action, in order to be able to develop this kind of knowledge, called technological knowledge (see the criteria for this kind of knowledge above). And we went one step further. Data can (and should in my view) be produced and used at the level of reality, that is, at the level of the real-life interventions. In our meta-theoretical approach of synergetics, the systems dynamics implemented are of permanent 2-fold interest (Sommerfeld & Hollenstein, 2011). The first way of data usage is using it at the level of practice for quality purposes. The second way of using it is for research purposes, meaning a reentry of the same data as used in practice into the system of science. Real-time monitoring is just an example of how system dynamics can be observed through a specific method of high-frequent longitudinal data (Schiepek, Tominschek, Eckert, & Conrad, 2007; Sommerfeld et al., 2005). What Kazi (2003) in England and the United States or Blom and Morén (2010) in Sweden and the Scandinavian countries do or what Michael J. Lambert and colleagues do in clinical psychology (Okiishi et al., 2006) very much resembles what I want to highlight here: The interest of a professionalized practice and its corresponding action science in knowing what happens and in knowing what one does and in knowing if the expected results can be achieved and how this interconnects falls together.

So, this matrix can describe the structure of the knowledge base and the levels to be integrated, as well as the challenges of connecting different elements of knowledge along the core task of building specific action theories/technologies. There is an additional final point. As mentioned previously, there are two distinct social systems that primarily use different modes of knowledge production. If professionalization is the aim, these two systems, science and practice, have to be coupled. Publication, education, and also translation, for example, are possible modes of coupling. But those are one-way modes. The underlying rationale is a hierarchic or unilateral one. In short, you could say that science knows and practice applies the scientific knowledge. If von Weizsäcker is right and if it is true that we need recurrent "circular movements" of observation, explanation, and experience to create a solid technological knowledge base, science lacks an important component: experience and knowledge creation in action. Therefore, there should also be two-way modes of coupling. Inspired by the well-known work of Gibbons et al. (1994) on "the new production of knowledge," especially the so-called Mode 2 and with reference to Neidhardt (cf. above), cooperation in knowledge production appears to be such a two-way mode of coupling. The rationale is heterarchical or bilateral.

Actually, the model of "cooperative knowledge production" (see Figure 2) is a recombination of "Mode 1" and "Mode 2" forms of knowledge production in combination with the perspective of coupling the systems of science and practice in order to build the profession. The fundamental concept is the creation of forms to exchange different types of knowledge at a "higher level" by attempting to solve actual problems emerging from practice which require innovation or development

(to be slightly more modest). The problem-solving process is a structural incentive to update and make explicit the practical knowledge (the "theories in action" as formulated by Argyris and Schön (2008), because such a cooperation only can work productively if the problem and the need for development is formulated by the practitioners. Thus, professionals have to reflect on their routines, describe these, and try to explain why the routines are not sufficient. Eventually, these descriptions encounter research findings on their practice which are explicit by their very nature. It might be that evaluation research is the starting point. In the circular view framework, it is not important where the circle starts. Important is that the need for development has to be recognized in practice. Otherwise, the hybrid knowledge of the practitioners (see Gredig & Sommerfeld, 2008, for this notion) derived from their former problem-solving processes, partly tacit or implicit and stored as organizational knowledge, will not be exposed and there will be no cooperation at the level of knowledge production.

In our conception of this developmental process as a cooperative process between science and practice, a dual transformation of knowledge occurs. The first transformation of knowledge is linked to the immediate problem solving and will result in amended hybrid knowledge and different theories in use. But the point here is that the knowledge for action developed *in* practice *for* practice itself represents material for the formation of scientific theories *of* action. The second aim embedded in this model is therefore to translate the insights, the deconstructed elements of hybrid practical knowledge, and the newly developed concepts into the science system and there to pursue a process of reflection, evaluation, and theorization. Without doubt, the cooperating scientists will return to their workplaces with a host of unanswered questions. Yet questions are the fuel which drives the process of scientific reproduction and knowledge production. These complex questions are the central structuring element for the transdisciplinary integration of knowledge as described previously. The graphic merely illustrates the relation between basic sciences and action or applied sciences. From this viewpoint, they become "supporting sciences" delivering the significant parts of "nomological knowledge" and "knowledge on facts," that is, the elements for the transdisciplinary work of the action science on "technological knowledge."

There is another reason for two-way modes as proposed here with the cooperative mode of knowledge production: culture building. What has been described so far is situated on the level of a single project that might produce good results for the practice involved and even some new insights and theory on the scientific side. Still, this is at the best just one successful project. Yet, this is where the circular movement begins. Many circular movements will be necessary to arrive at a consolidated knowledge base. Therefore, practice and science have to develop a long-lasting relationship in the awareness that they are "structurally coupled," a notion of Luhmann (1995), that means in short that they are the precondition for each other. This would be a significant change in the (knowledge) culture of social work. As mentioned previously, the (action) science of social work and the (professional) practice of social work

follow the same fundamental structure of reasoning: What has to be done to . . . . This might facilitate the cultural change that, in my opinion, has to occur if we want to "relevate" (see Note 4) scientific knowledge in practice and by doing so forward professionalization. The possibility to participate in knowledge production that is offered by two-way modes of knowledge production and transfer might be an even stronger factor in working toward a professional culture as outlined here. The precondition and therefore the fundamental necessity of such a cultural transformation is to have a scientific discipline, a science of social work as the counterpart that can be coded as being part, albeit different, of the same unity. Only then is integration at the level of the social systems, science and practice, at reach.

Discussion

Following this thesis of what social work as a scientific discipline is and, in a very short delineation of how to attain this, I would like to finish with a few reflections. First of all, I want to underline that the basic propositions are fundamental in the sense that they operate at a deeper level than the various epistemological approaches in science. If social work should be oriented in a positivistic, constructivist, pragmatic, critical realist, or in any other conceivable way, will be part of the disciplinary debates in the future. These debates are part of the scientific process because of the epistemological limitations of human beings. Aiming deeper with philosophical anthropology and a general philosophy of science attempts to define the general form of social work science beyond or beneath these discussions which in my view only make sense if there is a discipline and a disciplinary discourse. Otherwise, such discourses are purely philosophical and only interesting in the abstract. But in respect to the science of social work, debates on the epistemological approaches are debates on how to resolve the epistemological problems of that discipline. Of course, I am not free of such epistemological considerations. We all have to take a position on that. As mentioned previously, I think in a realist way. When the result of the argument is that the center of social work as an action science is constituted by the real-life problems of social work practice, then I am unable to think any other way. And a consolidated knowledge base only is conceivable if there are nomological theories describing real regularities and mechanisms. But that might be different for others. And what a realist perspective is might also need to be discussed. But I think and hope that the way of creating a consolidated knowledge base in action sciences will work for social work as well. If so, the development of the discipline will show which approaches will have been proven productive for the creation of this social work knowledge base. And maybe this will teach us something on the epistemological approaches themselves.

Second, I want to highlight a certain, nevertheless distant cousinship of the conception of an action science producing all types of scientific knowledge, that is, including technological knowledge, with the evidence-based practice approach that during the last decade has marked the (mostly critical)

scientific debates in German-speaking countries (Otto, Polutta, & Ziegler, 2010) and empirical practice in the English-speaking parts of this world. In the outlined concept, research on effectiveness is an important aspect. Actually, I assume that the evidence-based practice movement has promoted the debate on the question of a social work science because there are too many unresolved questions. In any case, the approach of an action science goes far beyond evidence-based practice because measuring effectiveness is just one of the four criteria for technological knowledge and, even more importantly, a consolidated knowledge base does not evolve from adding and meta-analyzing empirical data. The specific theories of action (the technologies) need to be theories and comprise multidisciplinary knowledge in order to explain the functioning of whatever intervention may be in focus and the causalities they are approaching. Additionally, there is an important difference in the application of the findings. Empirical data on effectiveness, above all if it is pure black box research, dispense with the responsibility of these findings not only to the practitioners, as discussed previously, but also to the political sphere that makes decisions on the allocation of resources for this practice. If we take into consideration that the knowledge basis for these sometimes far-reaching decisions is very thin, compared to the criteria for technological assumptions far too thin, there might be a problem of responsibility. The aim of a transdisciplinary action science of social work instead is to build a consolidated knowledge base to enable the profession and professional practitioners to make responsible and informed choices. This kind of knowledge would be a solid ground for the legitimacy of professional social work and for the negotiations with politics in the socioeconomic struggles for resources.

Despite these more speculative considerations on the knowledge base as a power resource for the profession, one thing about the future of social work emerges clearly. A discipline with so many open questions at the junction of the social sciences and the humanities has brilliant potentials for development, assuming it is able to resolve the transdisciplinary challenges connected with this structurally given position in the intersecting area. These challenges are immense. Many will argue that this endeavor is a kind of mission impossible. But given the number of scientists working in the schools of social work, given all these well-trained upcoming PhD-students, given the relevance of social work for the well-being of huge populations and social peace inside modern societies, given the immense scientific knowledge currently available, the chances might be not so bad. To find out, a scientific discipline of social work is needed in order to be able to organize, to orient, and to focus the competencies and the scientific activities toward a consolidated knowledge base, creating a scientific output on the way that is recognizable as belonging to and coming from social work.

Postscript

The Swiss Society of Social Work (SSSW) was only founded in 2006. The main goal of this academic society is to contribute to the development of the social work science by organizing scientific debate and exchange, including the social networks necessary to achieve these goals. Its other main objective is to represent the discipline in political, educational, and scientific organizations and debates. On May 25, 2013, the delegates (i.e., the presidents of the diverse scientific member societies) of the Swiss Academy of Humanities and Social Sciences unanimously elected the SSSW a new member of the Academy after having thoroughly evaluated the scientific performance of Swiss Social Work Science over the last 10 years.

Notes

1. Action science might be a misleading term for English-speaking persons. It has not been derived from conceptions like for example "participatory action research" as formulated by William Foote White (Whyte, 1991) or similar approaches. The German word *Handlung* means act. *Handlungswissenschaft* emphasizes that acts (usually professional acts or action) are the object of this kind of scientific disciplines.

2. The formulation "a perspective from Europe" aims to emphasize the provenience of the thoughts to be explicated in the following pages. But it also wants to stress that it is not "the" European perspective. It is not a systematic review of European debates on the issue of a social work science. Actually, the discourse of reference is that of the German language, led in Switzerland, Germany, and Austria, which without doubt are European countries. These German debates on social work are very rich but almost unknown outside these countries because of language issues. Therefore, it might be interesting for the discourse in the English language to gain some insight. But again it is "a" perspective, not "the" perspective.

3. Social work, from a gender perspective, is a "female" profession in contrast to other "major" professions and science in general. Even if for some this might sound outdated, this might be one explanatory factor as to why large-scale scientific social work studies are conducted but not recognized as such, not even by the social workers (academic or professional) themselves.

4. To "relevate" is not an English word nor is "*relevieren*" a German word. Nevertheless, Helga Nowotny (1975), probably best known for her work on "The new production of knowledge" together with Gibbons and others, has created this word in an early work on the "Irrelevance of Social Sciences". With this word creation, she stresses that knowledge is not just relevant or not and can be received or refused but has to be "relevated" in the sense that cognitive structures need to be built which are able to recognize the relevance of scientific knowledge before it becomes relevant in daily practice. She shows that relevance has to be a bilateral concept, not a simple sender–receiver issue.

5. It seems that "explaining" is a term that has gained weight in the social sciences over the last years. The prominent way to explain complex functioning is to reveal mechanisms linking different levels of reality (in sociology, e.g., Maurer & Schmid, 2008). In social work together with the critical realist paradigm, mechanisms are in the center of interest (e.g., Blom & Morén, 2010). In our own research work, we prefer the term "dynamics." Describing systems dynamics and explaining them through the patterns that structure the dynamics follows a similar approach (Sommerfeld & Hollenstein, 2011)

6. In German Social Work, there are two interesting approaches that have developed a somehow different notion of effectiveness as an alternative to evidence-based practice. They both stem on the subjective use, users (*Nutzer*), or addressees (*Adressaten*) of social work make of social work services.

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