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Enhancing a Potential-oriented Approach

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Abstract

This article explores the implications of founding transdisciplinary collaborations of knowledge production in critical realism. We call such equal partnerships of researchers and practitioners knowledge alliances. Using the distinction between the referents that we refer to (what our research is about) and our references (our research about that), we show that practitioners can contribute to the process of knowledge production by providing access to referents and producing references but also by achieving relevance. Researchers and practitioners bring different types of knowledge. To become excellent, knowledge production should be organized in ways, which engage these different types in a constructive interplay. We call this approach potential-oriented, which we put in contrast to the empiricism of evidence-based research and policy-making. Our deliberate choice of the term potential-oriented reflects the shifts in philosophy suggested by critical realism, but also a sensitivity for how practitioners communicate and express themselves.

Keywords: knowledge alliance; critical realism; transdisciplinarity; social cohesion; urban development

Introduction

The authors of this article have for many years researched on the increasing urban and societal cleavages and how to deal with them. In many of these projects, we have worked together with representatives of different knowledge, like urban inhabitants, public institutions, civil society organisations and social movements. Such collaborative knowledge production can be seen as transdisciplinary since it combines ‘interdisciplinarity with the participation of extra-scientific actors’ (Jahn, Bergmann, and Keil 2012, 5). We have opted to call them knowledge alliances (KA). On the basis of

many such projects, we have experienced that a knowledge alliance may contain a potential of both dealing with societal challenges and developing scientific knowledge. To succeed with that, however, it should be underpinned by critical realism, we will argue in this article. Reflecting the shifts within philosophy suggested by critical realism but also to facilitate the communication with collaborating practitioners, we call it a potential-oriented approach.

The dominant approach to deal with relevant societal problems, however, is evidence-based policy making based on empiricist epistemology. It relies on statistical correlations, which ‘remain the socially sanctioned way to arrive at "evidence-based" research to inform public policy’ (Bhaskar, Danermark, and Price 2018, 76). Empiricists concentrate on identifying and naming constant conjunctions of observable phenomena. Evidence-based policy-making results from the ‘the utilitarian turn in research funding policy’ (Solesbury 2001). Such explanatory models tend to focus on symptoms, not causes (Jessop 2015), neglecting the crucial distinction between the problems and how one defines them. Instead, the problems are taken for granted and because of this, we call it a problem-oriented approach, again reflecting a sensitivity for the communication and thinking of practitioners.

In this article, we will put forward a potential-oriented approach, drawing on critical realism, in contrast to such a problem-oriented approach, associated with the empiricism of evidence-based research and policy-making. The objective is to explore the implications of founding transdisciplinary collaborations of knowledge production, here known as knowledge alliances, in critical realism. How can a potential-oriented approach explain the significance of knowledge alliances? Bhaskar, Danermark, and Price (2018) have provided a theoretical justification for interdisciplinarity. We want to take it one step further to embrace transdisciplinarity too.

The term KA emerged of our joint involvement in an EU-wide social platform - *Social Polis–Social Cohesion in the City* (2007-2010) – as a co-coordinator and external expert. Its overall objective was to develop a research agenda to foster social cohesion in cities by critical analysis of research to date, and by constructing a social platform of networks for dialogue and agenda setting (Cassinari et al. 2011). The term KA appeared in a publication by Stigendal (2010): ‘This new term aims to stress the mutuality needed in the further work. Scientific and analytical knowledge is important, but so is the practical knowledge of stakeholders.’ A few years later, Novy, Habersack, and Schaller (2013, 432) defined KA as ‘sustainable learning and research partnerships composed of researchers and practitioners in all their diversity, which are based on an attitude of respect, self-reflexivity and curiosity, a disposition for mutual learning and a culture of dialogue and democracy.’

At that time, the term had also been introduced in *Europe 2020*, however with a definition limited to alliances between ‘education and business’, in line with the dominant neoliberal agenda of competitiveness. A wider definition was used by the *Commission for a Socially Sustainable Malmö* (so-called *Malmö Commission*), set up against the backdrop of increasing health inequities and inspired by the WHO. One of its two overarching recommendations to reduce inequities in living conditions and make societal systems more equitable was to establish knowledge alliances. By that, the commission means ‘equal partnerships between researchers and stakeholders such as administrations, associations, trade and industry, focused on combining excellence and relevance’ (Stigendal and Östergren 2013, 131). As part of our objective in this article, presented above, we will show how relevance should be seen, not as something external to excellence but as integral to it.

In chapter 2, we will proceed by introducing, step by step, the conceptual building-blocs of our potential-oriented approach. The chapter ends up by associating relevance with one of three validity criteria, the other two associated with the references and the referents, respectively. By references, we mean unities of signifiers and signifieds. Distinguishing references from referents belongs to the main characteristics of critical realism. Using the distinction between references, referents and relevance, scientific knowledge should be validated against all the three. That implies a redefinition of excellence and paves the way for practitioners to contribute. In chapter 3, we will use the distinction to show how practitioners may contribute to assessing referents, producing references and achieving relevance. This will be supported by critically reviewing the literature and by presenting research results and techniques used in KA in which we have participated.

A Potential-Oriented Approach to Knowledge

As mentioned in the introduction, the choice of the term potential-oriented reflects the shifts within philosophy suggested by critical realism. Firstly, instead of asking the epistemological question of how to produce knowledge, we should begin by asking the ontological question about what we need to assume to make knowledge possible. Secondly and within ontology, critical realism urges us to shift our main attention from the actual events to the mechanisms that causes these events, or, with another term, to the potentials. To do that, we need to assume that reality consists of not only what we can observe and experience, and what intrudes on us. That belongs to a certain level of reality, called the empirical. We make sense of these impressions and experiences by understanding them as expressing a specific content associated, in turn, with another level of reality, called the actual. The level of the real embraces it all, i.e. not only what appears to be (the 'empirical') and that which has been actualized (the 'actual'), but also the

potentials inherent in the real which are not necessarily ethically positive.

It is crucial to understand potential-oriented approach first of all as a term, apart from what it means as a defined concept. Drawing on semiotics, we call the former the signifier and the latter the signified. Our deliberate choice of the term reflects not only the shifts in philosophy mentioned above, but also a sensitivity for how practitioners communicate, think and express themselves. It sounds appealing to those who want to transform existing situations of exclusion and segregation as well as those that believe in the potentials of ordinary people, for example the ones of young migrants. We have used this appeal to incorporate a critical realist philosophy without necessarily naming it, by translating what the practitioners call potential as positive potential. Examples range from the intercultural competence of young people to the emancipatory potential of the theatre of the oppressed (Stigendal 2018) or the deinstitutionalization of social services like Housing First (Weinzierl, Wukovitsch, and Novy 2016). That allows us then also to talk about negative potentials, like the ones causing inequality inherent in capitalist societies (Stigendal 2018).

Playing on the Distinction between Signifiers and Signifieds

This sensitivity has been developed in a number of transdisciplinary projects, whereas a major one which both of us participated in was *Social Polis* (see above), where academic and professional knowledge was mobilised to grasp different aspects of social cohesion (Miciukiewicz et al. 2012). What happens, then, when stakeholders from different countries are invited to work together with the researchers in an EU project on the theme of social cohesion (Stigendal 2010)? That depends on how familiar each partner is with the term (signifier) and what they mean with it (signified).

In Sweden, for example, the term social cohesion is hardly used and there is no general understanding of what it means, in contrast to the EU where a whole policy area

exists called cohesion policy (Crescenzi and Giua 2016). The point then is that practitioners from Sweden do not really know what the researchers are talking about. Practitioners have been invited to a project like *Social Polis*, but the researchers have already decided about both the signifier and the signified, i.e. the issue in terms of its empirical form (the term) and its actual content (the idea and/or concept). That would not be a problem if the practitioners were familiar with at least the signifier (the term) and perhaps also had their own understanding of it (the concept). But if they are not and if they do not?

‘What does the issue called social cohesion include?’, a practitioner would ask. Is the work that I do as a teacher or social worker included? Are my experiences in projects like Housing First of interest for research on social cohesion? What problems and experiences am I allowed to discuss? The lack of familiarity with the issue, the name of it as well as what it means, create uncertainty among practitioners. How should they know what the issue includes? They might regard social cohesion an academic issue, as it does neither stem from everyday life nor from the public debate, and feel alien to it.

We find the distinction between signifier and signified useful, as it illuminates a common problem when researchers and practitioners work together, as described above. As critical realists, however, we cannot restrict ourselves to this distinction because then we would commit the ‘epistemic fallacy’, assuming that reality corresponds to the knowledge that we have about it (Jessop 2015, 239). This assumption constitutes the basis of the philosophical position called social constructivism (for a systematic critique see Sum and Jessop 2013, 131).

Knowledge as both Reference and Referent

In contrast to empiricism and social constructivism, critical realism claims that ‘there are not only signifiers (e.g. words) and signifieds (concepts) but also referents’ (Fairclough,

Jessop, and Sayer 2002, 5). This means that knowledge differs from what it refers to. We make sense of reality, for example by producing knowledge. By doing that, we create references to what we make sense of, the referents. We will treat the concept of references as unities of signifiers and signifieds.

These real phenomena, the referents, are the objects that we focus on or that simply may intrude on us. We respond by trying to make sense and meaning of them. In this way, generally called semiosis, we reduce the complexity of the world (Sum and Jessop 2013). An obvious example is language, as all thinking is made through language. But complexity is reduced by structuring social relations, too. These are the two modes of complexity reduction; semiosis and structuration. Both of them have to be made, but not from scratch: Women and men make history under given circumstances. Thus, at a general level of abstraction, the social world can be understood as consisting of semiosis, structuration and agency.

In reducing complexity, the referents can be observable objects, but also knowledge. Thus, knowledge can be both a reference and a referent. As the latter, it exists regardless of what each one of us as individuals think about it, although represented by others. In order to be able to use it, however, we need to make clear for ourselves and others what the knowledge is about. That requires work and takes time. To the extent that we succeed, knowledge becomes a reference for us, which then also means that we reproduce it as a referent, i.e. something that some actors have referred to in the past and others might learn from it in the future. Knowledge depends on human agency to be both produced and reproduced.

In addition to the one between signifier and signified, the distinction between references and referents can deepen the explanation of the difficulties that often appear in collaborations between researchers and practitioners. As an example, practitioners

probably have experiences of exactly the same referents that the researchers refer to by calling it social cohesion (Novy, Coimbra Swiatek, and Moulaert 2012; Schiefer and van der Noll 2017), but the practitioners might call it something else. All too often, however, practitioners do not have the time or opportunity to go into a great deal of theorizing around the words they put on their experiences. Perhaps they are victims of discourses floating around, full of nice signifiers, buzzwords, disseminated by commercial media, religious organizations or other powerful institutions of sense-making.

Just as researchers, thus, practitioners try to make sense and meaning of the reality they experience. The practitioners might, perhaps, prefer to express the sense and meaning they make of their experiences in images, artistic expressions or story-telling, describing a concrete-complex situation, creating specific non-academic references to capture the multidimensionality of a referent. This might be a challenge for researchers, but could also provide opportunities to develop a proper use of imaginaries and metaphors in argumentation. Could what the practitioners express also be regarded as knowledge? It depends on what we mean by knowledge.

Recognising different Types of Knowledge

In line with the above, knowledge should be regarded as a way to reduce the complexity of the world. As all semiosis, it has to be made. Due to the demands for something to be called knowledge, it should be seen as produced, requiring human agency. That does not imply that the production of knowledge starts from scratch. On the contrary, somebody who wants to produce knowledge needs to appropriate existing knowledge and make it his/her own. Thereby, knowledge becomes personal, something which the appropriator knows what it is about and how to use it. Such personal knowledge differs from the collective knowledge that preexists us and which we may contribute to but only by first making it our own personal knowledge. Collective knowledge exists as a commons,

between us, heavily structured by power relations.

Learning means to link up to collective knowledge, but not passively. If we want to learn, we have to make knowledge our own and that requires work. The marks are supposed to confirm to what extent we have succeeded, albeit their validity should not be taken for granted. Moreover, learning occurs also outside the educational institutions and we should assume that everyone has knowledge. It is obvious, however, that knowledge differs. The knowledge of a researcher is not the same as the knowledge of a practitioner, for example a child care worker. Furthermore, this difference cannot be understood on the same quantitative scale. The former is not necessarily better than the other, but they are simply qualitatively different.

This qualitative difference has been highlighted from the early beginning of western thinking, in particular by Aristotle in his distinction between *episteme*, *techne* and *phronesis* (Bernstein 2011 [1983]; Flyvbjerg 2001, 57). As Flyvbjerg (2001, 2) puts it, '*phronesis* goes beyond both analytical, scientific knowledge (*episteme*) and technical knowledge or know-how (*techne*) and involves judgments and decisions made in the manner of virtuoso social and political actors.' For the purpose of this article, we will not make much use of the distinction between *techne* and *phronesis*, but treat them together as practical knowledge. Regarding *episteme*, in its turn, we will distinguish between two types of knowledge, depending on what level of reality it primarily refers to. The one type refers to observable phenomena and can be called empirical knowledge. The other type is called theoretical, focusing on identifying causal relationships and transfactual mechanisms. Its primary referents belong to the levels of the actual and the real.

To underline, the distinction between these three types of knowledge concerns the primary referents. For example, empirical knowledge always also includes theory, explicitly as well as implicitly, which makes it differ from information and experience. It

cannot be regarded as, for example, pure enumerations of facts. Similarly, what we here call theoretical knowledge usually also consists of empirical referents, if only as examples. The primary referent for practical knowledge, in its turn, is practice. Being able to, for example, write at a computer (*techne*) or solve conflicts, synthesize knowledge and evaluate arguments (*phronesis*) is what we mean by practical knowledge.

We favour research that organizes knowledge production in ways where different types of knowledge are constructively engaged in an interplay. Neither social constructivists nor empiricists can acknowledge this, because our understanding builds on the assumption that the predominantly practical knowledge of practitioners exists in the first place as a potential. For that reason, we need to start by believing in it and analyse it as an abstraction separately from its particular context; i.e. what we are doing in this chapter. Social constructivists cannot do that, especially the strong version of it (Sayer 2000, 90), because in their view a reality outside the corresponding knowledge about it does not exist. Inclining to idealism, they do not allow themselves to assess the efficacy of the extra-discursive. Whatever practitioners bring with them, it cannot be knowledge as long as it has not been signified as such. And if it does qualify as knowledge, it depends on the constructions of the social constructionists. Thereby, by focussing on texts and discourses, they grant themselves a privileged power position as experts in interpretation.

According to empiricism, potentials do not exist because they cannot be pointed out and observed. The scientist is expected to concentrate on identifying and naming constant conjunctions of observable phenomena. If, for example, a pupil freak out at a school, empiricists tend to attribute it to other observable phenomena, for example the family, as such a conjunction has been established by repeated observations. Empiricism does not allow for an understanding of, for example, the potentials inherent in the organization of the school, which may cause certain pupils to freak out. But such

potentials might be the main problem. For a critical realist, it is perfectly legitimate to draw such a conclusion, given of course that we possess knowledge on the potentials of school organizations. A teacher may draw a similar conclusion, but then perhaps on the basis of experiences and as part of her/his predominantly practical knowledge, in this case *phronesis*.

Empiricists, however, stick to what seems to be the problems, not for example our definition of it or the actualized potentials which causes it. For that reason we call such an approach, based on evidence-based policy-making, a problem-oriented approach. Its underlying positivism was exposed to a devastating critique already more than 30 years ago in geography (Harvey 2010 [1973]; Sayer 1985) and earlier than that in social science by C. Wright Mills (2000 [1959]). But it has regained prominence and a reason to that is its ability to proclaim itself as excellent. To show why and how involving practitioners in research can overcome such a restricted, empiricist understanding of academic excellence, a broader as well as more theoretically founded definition of excellence is crucial.

Incorporating Relevance in Excellence

The last decades have seen an upsurge in initiatives to establish collaborations between researchers and practitioners. In 2009, the European Commission published a report about it by the MASIS (Monitoring Policy and Research Activities on Science in Society in Europe) Expert Group called *Challenging Futures of Science in Society* (see Felt et al. 2009). The report highlights this trend of making science more relevant to society, but in parallel there has been an opposing trend which reaffirms the autonomy of science under the traditional notion of 'excellence', consolidated by the continuing emphasis on publication indicators (and international journal publications) in evaluations. The MASIS report (Felt et al. 2009, 16-17) criticises this notion of excellence, which runs the risk of

endangering the pursuit of relevance and favours ‘decontextualized and globalised science while context-related and more local research, dedicated to specific problem solving, is disadvantaged.’ However, relevance should not be seen as contradictory to excellence, the MASIS report insists and urges for a combination.

We would like to agree, but we believe that there is a need of theoretical justification. What makes science autonomous? In our view, this depends on the approach to knowledge, founded in a certain ontology. If knowledge is seen as being derived logically from theories, in line with the form of inference called deduction, those who do not know about these theories or what deduction means cannot contribute. Similarly, if knowledge is seen as being induced from empirical observations, in line with the form of inference called induction, those with no skills in statistical analysis have no access. Therefore, each one of these modes of inference consists of power relations. When they reign in isolation, they effectively privilege some and exclude others from research as a whole.

Critical realism does not force us to choose between those two modes of inference, nor does it force us to abandon them. To justify that cooperation can lead to better knowledge, an ‘anti-imperialist’ (Bhaskar, Danermark, and Price 2018, 81) meta-theoretical perspective is required. Critical realism provides that, and is for that reason ‘intrinsically supportive of interdisciplinarity’ (Bhaskar, Danermark, and Price 2018, 82). A methodology underpinned by critical realism acknowledges both deduction and induction. The deductive form of inference is of central importance in all science and it should be applied when the logical validity in the scientific argumentation is assessed. The inductive form of inference, in contrast, should be assigned a much more limited validity, because, as Danermark et al. (2005, 87) suggest, “the objects of science are not primarily empirical regularities, but structures and mechanisms”.

In addition to these two, a critical realist methodology embraces also abduction, a form of inference, associated with pragmatism, where one moves from one mindset to their conclusions in another mindset and sees something as something else. In contrast to deduction and induction, abduction does not claim its validity based on formal logic, but due to its usefulness, or with another word, relevance. A fourth form of inference which also relies on relevance is retroduction, probably the one most associated with critical realism. Retroduction means to ask questions like how something that appears to exist really can exist; if it is what appear that exists or something else. To take an example: Evidence-based problem-orientation exists because it actualizes the potential inherent in empiricist ontology of perceiving the world as composed of atomistic events in closed systems (Bhaskar 2010 [1989], 8f).

Danermark et al. (2005, 113) regard these four forms of inference as constituents of an explaining social science. Together, they enable us to move from the imagined concrete to more and more tenuous abstractions. From there, the scientific work should proceed by incorporating more determinations at lower levels of abstraction, moving from abstract-simple to concrete-complex analyses (Marx and Engels 1986, 37; Jessop 2015, 243). It is a 'reflexive spiral movement' of 'refining conceptual entry points in the light of substantive findings and deepening, widening, and modifying the empirical analysis' (Moulaert, Jessop, and Mehmood 2016, 179). In such a process of knowledge production practitioners can fulfil an important role, which abduction and retroduction opens the door for. Using all the four modes of inference contains the potential for incorporating practitioners on equal footing, valorizing respective strengths and thereby transforming power relations.

For such research to become excellent, we will suggest a redefinition of excellence by using three forms of validity associated with, in turn, the referent, the

reference and relevance. Firstly, scientific knowledge should be assessed with regard to what it explains about its referent object, at whatever level it exists. Secondly, the assessment should be made with regard to the consistency of the explanation as a reference object. Thirdly, seeing knowledge as production as well as reproduction requires us to assess it with regard to its relevance, which we associate with usefulness in the wider societal context.

From a critical realist viewpoint, all the three should be subsumed under the notion of practical adequacy (see for example Sayer 1992, 70; Danermark et al. 2005, 25) and seen as three forms for assessing the use-value of knowledge (Marx 1996, 45). We may call the three of them the referent, the reference and the relevance validity criteria of excellence. To become *excellent*, therefore, research needs to fulfil all of these criteria. Relevance is, thus, not a feature separated from excellence but an integral part of what makes research excellent. In the next chapter, we will highlight the contributions of practitioners with regard to both the referents, the references and relevance.

Knowledge Alliances

As stated in the introductory chapter, we call such transdisciplinary collaborations knowledge alliances (KA). In our definition, we stress the mutuality, attitude of respect, self-reflexivity, curiosity, and a culture of dialogue and democracy. KAs consist of equal partnerships between researchers and practitioners, in line with the notion of interactive research (Svensson, Ellström, and Brulin 2007). The partners enter the KA from different directions and with different combinations of the three forms of knowledge as well as knowledge interests. The point is then to make a context of the KA where these differences can thrive, benefit each other and be taken advantage of in a joint process of production (Novy, Habersack, and Schaller 2013).

To share knowledge in its diverse forms, it has to be actualized and made explicit, which could be done if practitioners and researchers work together in favourable and long-term social contexts and arenas. This requires mutual respect of the respective professional merits, but also on other grounds, for example owing to the courage, sense of humour or political experience of practitioners. Only then, power asymmetries can be reduced and practitioners be involved based on conditions favourable to all partners (Hirsch Hadorn et al. 2008a). This enables both to make the produced knowledge their own. For the researcher, this means that the scientific outcomes have to be exposed to the normal scrutiny in the validation of it. As this article focuses on the implications for scientific knowledge, we will proceed by clarifying the role of practitioners with regard to the above described three criteria of excellent research; referents, references and relevance.

Accessing Referents

Just like in any other process of production, the referents are the raw material that knowledge production aims to make sense and improve our understanding of. The accessibility of these referents, thus, becomes a key issue. There is certainly a lot to learn from empiricist and constructivist methods in producing knowledge (Bhaskar, Danermark, and Price 2018), but such methods tend to be imbued by certain limitations and insufficiencies when academics see it as their privilege to carry them out. For example, a statistical survey can be flawed by the choice of questions, which some perhaps understand and others do not, some see as provocative and others do not, some understand in one way and others in another way, especially when it deals with issues like exclusion, segregation, multiculturalism and marginalization. Making personal interviews can be difficult due to differences in language, culture, class and/or age between the interviewer and the interviewee. The latter might not even accept to be

interviewed or the interviewer cannot get hold of them.

The access to referents can be improved by working together with practitioners, as they are often gatekeeper for certain types of information, specific non-conformist or deviant groups and possess practical knowledge on their everyday context, housing conditions as well as on interacting with residents. In several surveys on living conditions made in Malmö, council workers and young adults were engaged for interviewing. In the largest one, 100 council workers, divided in three consecutive rounds which lasted for three years, carried out 3,700 interviews with residents, mainly in their own homes. These council workers had their ordinary work in the areas where they made the interviews and they were on paid leave of absence to carry them out (Stigendal and Östergren 2013).

As these projects required a special knowledge to conduct interviews, tailor-made and problem-based courses were included, building on and supplementing the participants' own knowledge. The latter included knowledge on the population regarding its composition and needs, challenges in the neighbourhoods, resources, activities, crime, loneliness etc. They had knowledge on the housing areas and their facilities, distances, stigmatized neighbourhoods and infrastructures. They knew a lot about how to interact with residents. Their knowledge was also used to ask questions.

Due to all this knowledge, the practitioners became decisive in getting access to people as well as in the formulation and asking of questions. Furthermore, they contributed by bridging differences and improved communication with people, bearing in mind the need to understand the local slang but also other languages (interpreter role), also in terms of culture, for example young people or immigrants. They were also decisive in getting access to information of many other different kinds, not the least regarding rumours or popular culture.

Producing References

Deduction and induction have to be learned through education. Thereby, the potential of using them is inherent in the individual. In science-society interaction based solely on a deductive or inductive methodology, practitioners without high levels of formal education are therefore disadvantaged, while researchers are privileged. However, researchers that also rely on abduction and retroduction need more than logical thinking, skills in statistical analysis or knowledge on qualitative methods. As Danermark et al. (2005, 80-81) highlight, abduction depends on creativity, fantasy and ability to associate, while retroduction relies on an ability to abstract. To succeed with these forms of inference, one needs more than formal education. In principle, the whole spatial and social context of research as well as psychological and social competences of researchers becomes important.

In a KA, the much needed creativity of researchers may be spurred by questions from the outside of ordinary research. The experience and knowledge of others can stimulate researchers to see something as something different, characteristic of abduction. As an example of how that can be achieved, we want to mention the forum theatre, a method based on the theatre of the oppressed by Augusto Boal, used in the research project *Unequal Diversity* (Novy 2012). In this project, researchers collaborated with Paulo Freire Centre as well as pupils and teachers at two schools, the one a public school mainly attended by migrants and the other a grammar school. The use of the forum theatre was very helpful in facilitating non-verbal forms of communication. This reduced the barrier for the pupils from the secondary school to participate. It also helped the researchers to deal with middle to upper middle class pupils from the grammar school who have grown up in their own milieu, considering their life, their acting and their

perception as 'normal', sometimes treating socially disadvantaged, younger pupils with migrant background with exoticism and patronization.

Practitioners can contribute by revealing the unconsciously incorporated semiotic moments in research by asking other kinds of questions. Researchers benefit from being questioned by others and forced to explain themselves using other means of expression than the typical ones in the scientific community. This raises awareness of power relations incorporated in apparently neutral rationalist discourse. The practitioners may help the researchers revealing these unconsciously incorporated semiotic moments and reminding them about other potential referents, although by other means of expression. Inclinations of researchers to over-emphasize theoretical knowledge may be counterbalanced by the stress on relevance from the practitioners' interests. Working together may enable both parties to make the knowledge produced their own.

Besides providing access to referents, the practitioners in projects like the ones above, have contributed to the process of knowledge production by shaping a creative, stimulating and curious as well as demanding context for it. They have also contributed by seeing things as something else, in line with abduction, and thereby challenged the views of the researchers, forcing him/her to elaborate the arguments. Furthermore, the practitioners have contributed to retroductive inferences by suggesting the kind of ideas called contrafactual. It consists of questions like 'What if?' and 'How would it be if ...?'. Danermark et al. (2005, 101) describe contrafactual thinking as fundamental for all retroduction. In a contrafactual thinking we use our experiences and knowledge on the social reality but also our capacity to abstract. Danermark et al. (2005) deal with science, but contrafactual thinking is of course a concern for others too, like for example practitioners working in neighbourhoods characterized by social exclusion. They have to ask themselves many questions about how to do instead. That develops their potential to

think contrafactually, at least those who choose to represent a potential-oriented approach.

A key prerequisite for good interdisciplinarity research is crossdisciplinarity, defined as the ‘ability and the potential to empathize with, understand, and employ the concepts of disciplines and fields other than one’s own’ (Bhaskar, Danermark, and Price 2018, 49). Transdisciplinarity goes a step further by integrating practitioners’ knowledge in the research process (Felt et al. 2016; Hirsch Hadorn et al. 2008b). In a critical realist research design, transdisciplinarity, furthermore, mobilizes practitioners for abduction and retroductive inference to problematize the framing in specific disciplines and policy fields. It stimulates the researcher’s creativity and innovativeness.

Achieving Relevance

As researchers, we have chosen to devote much effort to produce knowledge on the lack of social cohesion in cities, its causes and how to combat it. This is how we want our research to become relevant and an important precondition for this is of course such a will. Initiating KAs with the aim to become relevant in that sense can attract practitioners with a particularly valid potential for contributing to scientific excellence. This may include teachers from schools in socially excluded neighbourhoods or professionals working with homeless people. They all experience the effects of inequality, either directly or indirectly. They all have to deal with it and they therefore bring that desire for change to the KA. That includes expectations of the joint knowledge production, which may become a very fruitful challenge for the researchers.

The practitioners contribute by bringing in experiences of actualized knowledge. What researchers produce is knowledge as potentials. Actualisation of knowledge requires using it. Once potential causes are actualised, something new emerges.

Therefore, an event must not be reduced to its actualised potentials. An actual cause is something else than a potential cause, because the actualisation of that potential cause always happens in a specific context with its own properties. That is why natural scientists are fond of doing experiments to see what happens when a certain potential is actualised. Social scientists cannot treat their objects similar. Therefore, collaborating with practitioners in KAs becomes so fruitful as they know about the use of a certain knowledge in a specific context. They have experience of what works and thus the relevance of knowledge.

An involvement of practitioners on biased conditions, however, runs the risk of not actualising their potentials. To force practitioners to express knowledge in a certain way impedes them from making the knowledge produced in KAs their own knowledge. Furthermore, it makes it more difficult for researcher to take advantage of the experience and knowledge of the practitioners. As an example, street workers in neighbourhoods associated with a lack of social cohesion might spend little attention to theoretical brooding. They need incentives to participate in KAs. A practitioner would ask ‘What can I bring back home to my work in the community?’ Restless kids need to be taken care of. Schools have to be kept open despite vandalism, fires, shattered windows and burglary. Many of these practitioners probably ask themselves: Are we doing the right thing? For some, the answer is clear. They know that they are not doing the right thing, but given the circumstances – cuts in public spending, unemployment, raising rents - they cannot do anything else. Co-operating with such practitioners on an equal footing can put a fruitful pressure on the researchers and provide them with valuable sources of inspiration as well as a need to perceive the (positive and negative) potentials of political agency.

An inspiring method used in KAs is non-elitist peer review. Peer review has long been used by academics, but the EU Commission made it a part of its ‘open method of coordination’, while thereby expanding its field of application to practitioners at different levels. At first, it was used only in national comparisons, but the scope became gradually expanded. Supported by Eurocities, peer review received a larger spread. The method involves a limited number of practitioners working on similar issues who meet and evaluate each other's efforts.

In projects like ‘Young people – from exclusion to inclusion’ (Stigendal 2006), researchers participated in such collaborations to develop knowledge on social exclusion in several European cities and on how to combat it. In each city, research was made, which the practitioners supported by providing information, contacts and interpretations. They also brought in the relevance issue, sometimes with a vigour and thereby forced the researchers to validate their research not only concerning the explanations about its referent objects and its consistency as a reference object, but also with regard to its relevance. It all resulted in reports, written by the researchers, which were discussed, assessed and improved both locally and internationally. In the end, books were published in which concepts were defined, the local neighbourhoods were positioned in their urban contexts and compared, many other scientific sources were drawn on, the main phenomenon of social exclusion was explained, the method was justified and criteria of good practice were suggested. All of it aimed at meeting a scientific standard, but presented in a way readable also for practitioners.

Conclusion

In this article, we have explored the implications of founding transdisciplinary collaborations of knowledge production in critical realism. We call such collaborations

of researchers and practitioners knowledge alliances, defined as equal partnerships where researchers and practitioners work together to produce knowledge, based on an attitude of respect, self-reflexivity and curiosity. By that, we have aimed at taking a step further beyond interdisciplinary collaborations, limited to partnerships between researchers from different disciplines.

Using the distinction in critical realism between the referents that we refer to (what our research is about, the research object) and our references (our research about that), we have shown that practitioners can contribute by, firstly, providing access to referents; for example by getting access to people, asking questions in understandable ways and bridging cultural differences. Secondly, we claim that practitioners can contribute by producing references. They can do that by, for example, spurring researchers to see something as something else in line with the form of inference called abduction and suggesting contrafactual ideas in line with the form of inference called retrodution. There is also a third way in which practitioners can contribute. That is to bring the currently important societal issues into the research process and thereby putting pressure on the knowledge production to become relevant.

We suggest referents, references and relevance as associated with three forms of validity criteria. The notion of excellent research, we claim, should be redefined to include all the three and thus treat relevance not as something externally optional, but as an integral part. What makes research excellent, thus, depends on what it says about its referents (research objects), its conceptual and theoretical consistence as a reference and its societal relevance. That practitioners may contribute in all these three senses makes the case for transdisciplinary collaborations in knowledge alliances strong. To simplify, we claim that practitioners and researchers can be said to meet in the actual, the former approaching it from the empirically observable and the latter from the potential. While

practitioners bring knowledge, mainly of a type called practical, researchers are expected to bring the types of knowledge called empirical and theoretical. In research aimed to become excellent, knowledge production should be organized in ways, which engages these different types of knowledge in a constructive interplay.

We call this approach potential-oriented. Our deliberate choice of that term as a signifier reflects the shifts in philosophy suggested by critical realism, but also a sensitivity for how practitioners communicate, think and express themselves. The choice of signifier matters immensely, we claim, for knowledge alliances to become successful. To highlight the difficulties that may hinder actualizing the potentials we have played on the distinction between signifiers and signified, treating these two as the constituents of references. In contrast to a potential-oriented approach, evidence-based policy making does not believe in this distinction between referents and references, due to its empiricist foundations. Therefore, we have called it a problem-oriented approach as it lacks the ability to distinguish between the problem and the definition of it, taking what seems to be the problem and, thus, the former for granted.

In this article, we have aimed at taking a step towards a new understanding of excellent research. We hope to have paved the way for further work to elaborate a consistent research programme for transdisciplinary knowledge production. In this respect, methodological questions will become decisive. We assume that there is huge potential in systematically using methodological insights from transdisciplinary research and link it to interdisciplinary research based on critical realism.

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