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SCIENTIFIC/INTELLECTUAL MOVEMENTS REMEDYING EPISTEMIC INJUSTICE: THE CASE OF INDIGENOUS STUDIES

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Abstract: Whereas much of the literature in the social epistemology of scientific knowledge has focused either on scientific communities or research groups, we examine the epistemic significance of scientific/intellectual movements (SIMs). We argue that certain types of SIMs can play an important epistemic role in science: they can remedy epistemic injustices in scientific practices. SIMs can counteract epistemic injustices effectively because many forms of epistemic injustice require structural and not merely individual remedies. To illustrate our argument, we discuss the case of Indigenous Studies.

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1. Introduction

Much of the literature in the social epistemology of scientific knowledge focuses either on scientific communities (e.g., Longino 2002; Kitcher 2001) or research groups (e.g., Andersen 2016; Rolin 2015; Wagenknecht 2014; Wray 2007). We wish to draw attention to the epistemic significance of scientific/intellectual movements (SIMs). As Scott Frickel and Neil Gross define them, "SIMs are collective efforts to pursue research programs or projects for thought in the face of resistance from others in the scientific or intellectual community" (2005, 206). In philosophy of science, SIMs deserve more attention than they have received so far since they can contribute to the development of science in many ways. They can influence scientific agenda setting by drawing attention to "undone science," that is, areas of research that are left unfunded, incomplete, or generally ignored but that can be argued to be worthy of more research (Frickel et al. 2010). They can introduce novel perspectives on how "significance" is to be understood in "significant truths" (Kitcher 2001, 82), thereby urging scientific communities to be responsive to the needs of different social groups in the society. Moreover, certain types of SIMs can play an epistemically beneficial role in science by making use of epistemic resources they have in virtue of their collaboration with lay communities or social movements (Wylie 2015). Collaborations between academic communities and social movements can be epistemically fruitful because activist researchers or researchers collaborating with activists have access to social networks facilitating their attempts to gather relevant information (Hauswald 2015). More generally, collaborations enable scientists to have access to local and situated knowledge - that is, knowledge of the particular social and cultural context and environmental circumstances - which is crucial in attempts to apply scientific knowledge. SIMs can be epistemically productive also by enabling scientists to generate evidence under conditions where relations of power tend to suppress or distort evidence, or by providing scientists with an epistemic

community where they can receive fruitful criticism for research which may be ignored in the larger scientific community (Rolin 2016).

In this paper, we argue that certain types of SIMs can play yet another epistemic role in science: they can remedy epistemic injustices in scientific practices. In section 2, we introduce the notion of epistemic injustice and argue that many forms of epistemic injustice require structural remedies in addition to individual ones. In section 3, we introduce the sociological notion of SIM, and develop it so as to make it more suitable for the use of philosophers of science. We examine especially those types of SIMs that operate both within and outside of academia and argue that they can be particularly effective agents when aiming at remedying epistemic injustice. In section 4, we present a case study of a SIM of this type: Indigenous Studies.

2. Epistemic injustice in science

According to Miranda Fricker's definition of epistemic injustice, it is a wrong done to someone specifically in their capacity as a knower (2007, 1). One much discussed form of epistemic injustice is *testimonial injustice* which occurs when "prejudice causes a hearer to give a deflated level of credibility to a speaker's word" (2007, 1). An example of testimonial injustice is a situation in which a hearer finds a person's testimony suspicious due to the hearer's racist perception of the testifier. Another much discussed form of epistemic injustice is *hermeneutical injustice* which occurs when "a gap in collective interpretative resources puts someone at an unfair disadvantage when it comes to making sense of their social experience" (2007, 1). An example of hermeneutical injustice is a situation in which a person (or her audience) lacks an adequate concept for sexual harassment, and consequently, the person is not capable of articulating (or communicating) her experience to the audience in an effective way (2007, 151). As Fricker argues, "For something to be an injustice, it must be harmful but also wrongful whether because discriminatory or because

otherwise unfair" (2007, 151). Epistemic injustice is epistemically harmful because it maintains ignorance. As Fricker explains, it is "an epistemic disadvantage to the individual hearer, and a moment of dysfunction in the overall epistemic practice or system" (2007, 43). Epistemic injustice is also harmful because it suppresses and insults people as epistemic subjects, due to prejudicial stereotypes. According to Fricker, "To be wronged in one's capacity as a knower is to be wronged in a capacity essential to human value" (2007, 44).

Fricker's analysis of epistemic injustice has been developed and refined in many ways. Kristie Dotson (2011) introduces the notion of *testimonial smothering*. Testimonial smothering occurs when a potential testifier decides to remain silent because she recognizes the potential audience's unwillingness or inability to understand and appreciate what she might have said. David Coady (2010) expands on Fricker's analysis of epistemic injustice by introducing a distinction between discriminatory and distributive epistemic injustice. Testimonial and hermeneutical injustices are discriminatory because an epistemic wrong is done to someone due to a social identity prejudice against them. Whereas in the case of testimonial injustice someone is unjustly not believed because of prejudice, in the case of hermeneutical injustice someone is unjustly not understood because they are marginalized in the generation of shared concepts. *Distributive epistemic injustice* involves an unfair distribution of epistemically valuable goods such as education or information. For example, distributive epistemic injustice takes place when a person's opportunity to education is unjustly curbed or a person is left in a position in which she is ignorant of something she is entitled to know (2010, 109).

Heidi Grasswick (2017) argues that while scientific practices are prone to many forms of epistemic injustice, two forms stand out as the most conspicuous ones, *participatory epistemic injustice* and *epistemic trust injustice*. Whereas participatory epistemic injustice wrongs a person as a participant in a knowledge-seeking practice, epistemic trust injustice wrongs a person as a

receiver of knowledge (2017, 315). Participatory epistemic injustice occurs when someone unfairly refuses to recognize a person as a participant in a discussion, deliberation or inquiry (Hookway 2010, 156). As Christopher Hookway explains, to recognize someone as a participant in a knowledge-seeking practice requires more than taking someone's testimony seriously. It requires that one engages with another person by taking the person's questions and comments seriously and responding to them (2010, 155). Even those members of underrepresented social groups who have made it to the formal scientific community can suffer from participatory epistemic injustice when their questions and comments are taken less seriously and given less uptake than others' questions and comments (Grasswick 2017, 317). Also, they may not have opportunities to benefit from friendly criticism either because their contributions are ignored or met with unnecessarily harsh criticism (Rolin 2016, 18).

Epistemic trust injustice occurs when the conditions required to ground epistemic trust in scientists cannot be met for members of particular marginal or subordinated groups (Grasswick 2017, 319; see also Scheman 2001). In a relation of epistemic trust, someone trusts a person or a group to have good reasons to believe that p, and this is a reason for the trustor to believe that p. As Grasswick (2010) explains, scientists need to be trustworthy in the eyes of citizens in order for them to serve those citizens (see also Whyte and Crease 2010). Trustworthiness requires not merely that scientists are epistemically reliable but also that they are trustworthy in a moral sense. Trustworthiness in a moral sense involves goodwill towards those who are epistemically dependent on scientists (Almassi 2012; Wilholt 2013). When trustworthiness is understood in a moral sense, even those scientists who are honest and competent may lack trustworthiness in the eyes of subordinate or marginal social groups. The lack of trustworthiness may be due to a historical connection between science and social injustices (e.g., past uses of science against the interests of particular social groups, the unjust underrepresentation of particular social groups within the ranks

of scientists, and the abuse of members of particular social groups in scientific research). In the case of epistemic trust injustice, someone is wronged as a receiver of knowledge because the relations of epistemic trust that are necessary for the transmission of knowledge, are undermined by social injustices.

In sum, epistemic injustices come in at least six different forms: testimonial injustice and smothering, hermeneutical injustice, distributive epistemic injustice, participatory epistemic injustice and epistemic trust injustice. Insofar as epistemic injustice is a wrong done to someone in her capacity as a knower, the notion of "knower" should be understood in a broad sense, encompassing those who seek to participate in knowledge-producing practices or to find a trustworthy source of information, and not just those who already know or claim to know (Grasswick 2017, 314). This is because it is possible to wrong people in their capacity as knowers by preventing them from attaining knowledge that is significant for them. In a broad sense, epistemic injustice includes unfair impediments to one's capacity as an inquirer (2017, 314).

While we do not deny the importance of individual epistemic and moral virtues in overcoming prejudices (Fricker 2007), we argue that some epistemic injustices call for structural remedies (see also Anderson 2012). By structural remedies we mean collective activities that aim to change the social practices and institutions of science and not merely the behaviour of some scientists. For example, Helen Longino's (2002) norms for ideal epistemic communities can protect scientific communities from participatory epistemic injustice. The (tempered) equality of intellectual authority requires a scientific community to treat its members as equally capable of giving and receiving reasons, and the uptake of criticism requires a scientific community to engage and respond to appropriate criticisms (2002, 130-132). Also, if these norms are not realized, researchers can try to devise another structural remedy, for instance, by establishing a novel scientific community in which members of subordinate or marginal social groups are not met with

testimonial injustice or participatory epistemic injustice, the community as a whole strives to overcome hermeneutical injustice by developing concepts and theories to describe the social experiences of these social groups, and epistemic trust injustice is mitigated by building relations of trust between scientists and lay communities.

Structural remedies are needed for two reasons. First, many forms of epistemic injustice are structural and structural injustices call for structural remedies (Anderson 2012, 169). For example, hermeneutical injustice is structural because it is due to a gap in collective interpretative resources, and it requires a structural remedy because it is not only the potential testifier who lacks adequate terms to describe her social experiences but also her potential audiences lack the capacity to understand the terms. Participatory epistemic injustice can be structural because a failure to recognize someone as a participant in a knowledge-seeking practice is often due to a history of exclusion and marginalization in science education and the scientific profession. When participatory epistemic injustice is structural, a structural remedy is needed to target the institutional conditions that maintain exclusion and marginalization. Similarly, epistemic trust injustice is structural because it is due to a history of social injustice, and it requires structural remedies aiming for broader social changes.

Second, structural remedies are needed to counteract the cumulative effects of a series of epistemic injustices (Anderson 2012, 164-165). Different forms of epistemic injustice can reinforce each other. For example, when a person's educational opportunities are constrained by distributive epistemic injustice, she is likely to suffer also from hermeneutical injustice because she is not capable of fully participating in the social practices where new concepts and theories are articulated and developed. As structural remedies consist of collective activities aiming to make an impact both on educational opportunities and on the pool of shared concepts, they are needed along with virtue-based remedies and prevention measures.

The upshot is that epistemic injustices are complex epistemic and political problems that require not only individual but also structural solutions. In the next two sections, we argue that SIMs are apt to act as agents of structural remedies because they have the capacity to change the social practices of scientific communities, to establish novel epistemic communities, and to collaborate with social movements active in many other areas of society.

3. What are SIMs?

SIMs are collective efforts to pursue research programs in the face of resistance from others in the scientific community (Frickel and Gross 2005, 206). According to Frickel and Gross, SIMs are characterized by six features:

1. *Program*: "SIMs have a more or less coherent program for scientific or intellectual change or advance" (Frickel and Gross 2005, 206). Those scientists who develop an initial program for a SIM are typically dissatisfied with research in their scientific and intellectual fields, and they are ready to face the professional risks that are involved in a SIM (2005, 210). While not all SIMs are driven by moral and social values, in many cases the dissatisfaction concerns the value relevance of research, or lack of it.
2. *Challenge:* A SIM's program for scientific and intellectual change consists of practices which are "contentious relative to normative expectations within a given scientific or intellectual domain" (Frickel and Gross 2005, 207). As Frickel and Gross explain, "A movement is a SIM by our definition only if, at the time of its emergence, it significantly challenges received wisdom or dominant ways of approaching some problem or issue and thus encounters resistance" (2005, 207).
3. *Political:* The third feature of SIMs is closely related to the second one. SIMs are political in the sense that they aim to change relations of power in their scientific and intellectual fields.

As Frickel and Gross explain, “Precisely because the intellectual practices recommended by SIMs are contentious, SIMs are inherently political” (2005, 207).

4. *Collective:* SIMs are constituted through “organized collective action” (Frickel and Gross 2005, 207). Such action may involve organizing conferences, establishing societies and journals, editing special issues and volumes, and sometimes even publishing scientific manifestos.
5. *Limited lifespan:* SIMs are typically “episodic phenomena” (Frickel and Gross 2005, 208). Sometimes a SIM comes to an end because it has been successful in achieving its epistemic and institutional aims. In such cases, a SIM may be transformed into a more stable institutional form such as a school of thought, a specialty, or even a discipline (Frickel and Gross 2005, 208).
6. *Variety of aims:* SIMs may vary greatly in intellectual aim and scope (Frickel and Gross 2005, 208). Some SIMs aim to problematize previously understudied topics. Others seek to introduce new theoretical perspectives on an established terrain, and yet others aim to alter the boundaries of existing scientific and intellectual fields. Yet, SIMs differ from other social movements in that they have knowledge-producing aims and not merely social and political aims.

As Frickel and Gross (2005) define it, a SIM is a very broad category, encompassing movements that are epistemically successful or harmful. This is because the sociological definition of a SIM is neutral with respect to the epistemic criteria of success or credibility used in science. This makes the sociological definition inadequate for the use of philosophy of science. The six features are not sufficient to demarcate between SIMs that the scientific community in general recognizes as scientific, even if controversial, and SIMs that are seen as pseudoscientific. Our interest lies in SIMs

that can be distinguished from pseudoscientific movements in virtue of their manifesting some demarcation criteria such as the testability or verifiability of their claims (Resnik 2000).

In this paper, we focus on SIMs that have been epistemically successful in the sense that they have identified false or biased accounts of their subject matter of inquiry, and generated novel evidence, thereby increasing the empirical adequacy of scientific theories. We further limit our focus to a subgroup of such SIMs: those that aim at remedying epistemic injustices and collaborate closely with social movements. Examples of such SIMs include the movements that have generated gender studies and disability studies. We argue that SIMs are particularly effective agents when aiming at overcoming epistemic injustices. This is because, due to their collective nature, they have the capacity to change the social practices of scientific communities and to establish novel epistemic communities. Also, due to their collaboration with larger social movements, they have the capacity to change the social conditions under which knowledge is produced.

To illustrate how a SIM can do this, we discuss a SIM that has developed into a discipline called Indigenous Studies. The description of the case is based on literature published in the field and interviews with three key actors who have recently succeeded in gaining Indigenous Studies the status of a discipline at the University of Helsinki (Seurujärvi-Kari 2016, Virtanen 2016, Kantonen 2018).

4. The case of Indigenous Studies

The young discipline called Indigenous Studies and the movement that has produced it (henceforth we refer to both as IS) are an example of a SIM that has been successful both epistemically and politically. Like many other SIMs, IS is a spin-off of a larger social movement active in many other

areas of society, and its knowledge-producing aims go hand-in-hand with its moral, social, and political aims. The notion of *indigenous peoples* has gained political weight, and the last decade of the 20th century was declared the International Decade of the World's Indigenous Peoples by the United Nations. IS has arisen from the successful indigenous political movement.

The groups who identify themselves as indigenous peoples around the world have faced similar forms of oppression. Not surprisingly, the epistemic aims of the SIM are largely related to the political struggle against such oppression. Epistemic success is understood to mean that the SIM produces the kind of knowledge that is an outcome of overcoming epistemic injustices, or relevant for the concerns of indigenous peoples in some other way. According to Rebecca Tsosie, the history of indigenous peoples is abundant with epistemic injustices as they have been denied authority to interpret their own identities, cultures, and histories (2017, 358-359). Past epistemic injustices have left their traces in many academic fields, including archaeology, anthropology, history, and legal studies. These injustices are perpetuated and reinforced when contemporary archaeologists, anthropologists, historians, and legal scholars are called upon to act as experts on issues that have direct impact on the lives of indigenous people, and the indigenous people themselves are seen as biased, uninformed or otherwise lacking credibility (2017, 359).

IS fulfils the definition of SIM because it has a program for scientific change. It endeavors to take control of knowledge production related to indigenous peoples, and to focus on issues indigenous communities themselves deem important. Even as IS is gaining institutional status as a discipline, it is a multidisciplinary movement, involving, among others, cultural research, linguistics, jurisprudence, and environmental sciences. It also emphasizes participatory research practices and collaboration with indigenous communities. Within indigenous communities it focuses on mental decolonization and the strengthening of indigenous languages, traditions and cultural values (Smith 1999). IS also challenges dominant academic practices, for example by

attempting to have “indigenous epistemologies” taken seriously in academia, “not simply as interesting objects of study (claims that some *believe* to be true) but as intellectual orientations that map out ways of discovering things about the world” (Garroutte 2003, 10).

Any SIM that attempts to overcome epistemic injustices will unavoidably challenge also the epistemic authority of many scientists and scholars. Thus, it is likely to be met with resistance, either in the form of ignoring research conducted within the SIM, or of criticizing its program. Either type of resistance can give rise to epistemic problems in SIMs. Consider the first scenario. If mainstream scientists ignore the SIM, researchers working within the SIM may not have opportunities to benefit from critical perspectives as the other members of the SIM may not be sufficiently critical. The lack of critical perspectives can easily lead activist researchers to adopt some views dogmatically. As any other researchers, activist researchers may also be biased towards theoretical approaches that serve their moral, social, and political goals (Hauswald 2015). Consider the second scenario. In young, overtly political research programs, researchers easily interpret outside criticism as expression of political hostility, without recognizing its epistemic worth (Koskinen 2015). In the case of IS, such reactions have at times led even to demands that only people belonging to indigenous communities should be allowed to study indigenous people (see Stordahl 2008). However, as IS has gained recognition and academic standing in many universities, such claims have become less common.

Despite these epistemic problems, IS has achieved many of its epistemic and political aims. We argue that the epistemic success of IS in remedying widespread epistemic injustices is at least partly due to its social formation as a movement that is capable of mobilizing agents across disciplinary boundaries as well as the boundaries of science. To substantiate these claims, we examine the ways in which IS has remedied epistemic injustices.

IS has tackled testimonial and participatory epistemic injustices by focusing on the needs of indigenous communities. As our interviewees emphasize, research in IS begins from the needs of indigenous communities, and the research questions are typically formulated in collaboration with representatives of the indigenous communities. In other words, community members are recognized as credible witnesses and important participants in the inquiry. The existence of the SIM is crucial for such practices to gain ground not merely in single research projects but also in the larger scientific community. As past epistemic injustices cut across many disciplines, the SIM is a platform where scientists and scholars can find support and exchange ideas across disciplinary boundaries. Interdisciplinary interactions are necessary for the sustained and exhaustive study of the identified research problems as these problems often involve other disciplines than those represented in a project in which the research problem was first identified. For example, IS has succeeded in establishing and developing the ideas of indigenous land rights and intellectual property rights (Seurujärvi-Kari and Kulonen 1996). At the University of Helsinki, the importance of taking the viewpoints of indigenous communities into account is recognized also in sustainability science (see also Whyte et al. 2016).

The research on indigenous land rights is a good example also of remedying hermeneutical injustices. IS has succeeded in bridging the often vast differences between the ways in which people's relationship with land are understood in modern legal systems, on the one hand, and in indigenous communities, on the other. The long-term work on the tensions related to land rights has led to concrete outcomes; for instance, one of our interviewees, Lea Kantonen, pointed out that in Mexico some indigenous communities have legal experts who understand the ways in which the communities conceptualize their relationship with the areas where they live, and are able to provide legal advice and to defend their land rights in courts, if necessary. Thus, IS has succeeded in filling a gap in the collective interpretative resources that has put indigenous

communities “at an unfair disadvantage when it comes to making sense of their social experience” (Fricker 2007, 1).

Education is another issue that has been emphasized in IS right from the beginning of the movement. One of the shared experiences of oppression among indigenous peoples is that of forced assimilation through schooling: children have been taken to boarding schools where they have lost contact with their cultural identity, and even forgotten their mother tongues. Cutting access to information about one's own cultural heritage is an example of distributive epistemic injustice. Not surprisingly, one of the central aims of IS has been that of taking control of the education of indigenous children and young. (Seurujärvi-Kari and Kulonen 1996.) Like in the case of remedying testimonial, participatory, and hermeneutical injustices, also in this case, the epistemic success of IS is partly due to its social formation as a SIM. Taking control of the education of children requires teacher training that is appropriate for the task, which in turn requires reforms in the fields of pedagogy and, e.g., linguistics. A clear mark of success are the many schools in many countries where indigenous children now receive education in their own languages and are taught their history and cultural heritage.

Finally, epistemic trust injustice and testimonial smothering are problems that IS is able to confront because of its origins in the indigenous political movement. In many countries, indigenous communities have learned to mistrust researchers, or to believe them to be incapable of understanding or appreciating what the members of the community could say. Remedying these forms of epistemic injustice can require researchers who are seen as members of the community, or as representatives of trusted social or political actors, such as NGOs of good reputation.

5. Conclusion: SIMs remedying epistemic injustice

While epistemic injustices in science have attracted attention (Grasswick 2017), there is little understanding of the ways they are effectively corrected. We have argued that SIMs are capable of rectifying especially those epistemic injustices that are structural. In structural epistemic injustices, the social practices and institutions of science unfairly constrain people's abilities to make sense of their social experiences or to communicate them to others, to participate in the production of scientific knowledge either as scientists or as collaborators, or to form relations of epistemic trust that are necessary for passing knowledge from scientists to lay people. We have discussed Indigenous Studies (IS) as an example to illuminate how SIMs can overcome epistemic injustices. As social movements that coordinate the activities of scientists and scholars in different disciplines, they can tackle epistemic injustices at many fronts simultaneously. In virtue of their capacity to transform scientific practices and to establish novel scientific communities, they can effectively remedy structural epistemic injustices.

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