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Science Communication and Epistemic Injustice

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Epistemic injustice occurs when someone is wronged in their capacity as a knower.¹ More and more attention is being paid to the epistemic injustices that exist in our scientific practices. In a recent paper, Fabien Medvecky argues that science communication is fundamentally epistemically unjust. In what follows we briefly explain his argument before raising several challenges to it.

Overview

In “Fairness in Knowing: Science Communication and Epistemic Injustice”, Fabien Medvecky argues that science communication is fundamentally epistemically unjust. First, let’s get clear on the target. According to Medvecky, science communication is in the business of distributing knowledge – scientific knowledge.

As Medvecky uses the term, ‘science communication’ is an “umbrella term for the research into and the practice of increasing public understanding of and public engagement with science.” (1394) Science communication is thus both a field and a practice, and consists of:

institutionalized science communication; institutionalized in government policies on the public understanding of and public engagement with the sciences; in the growing numbers of academic journals and departments committed to further the enterprise through research and teaching; in requirements set by funding bodies; and in the growing numbers of associations clustering under the umbrella of science communication across the globe. (1395)

Science communication involves the distribution of scientific knowledge from experts to non-experts, so science communication is in the distribution game. As such, Medvecky claims that issues of fair and just distribution arise. According to Medvecky, these issues concern both *what* knowledge is dispersed, as well as *who* it is dispersed to.

In examining the fairness of science communication, Medvecky connects his discussion to the literature on epistemic injustice (Anderson, Fricker, Medina). While exploring epistemic injustices in science is not novel, Medvecky’s focus on science communication is. To argue that science communication is epistemically unjust, Medvecky relies on Medina’s (2011) claim that credibility excesses can result in epistemic injustice. Here is Medina,

[b]y assigning a level of credibility that is not proportionate to the epistemic credentials shown by the speaker, the excessive attribution does a disservice to everybody involved: to the speaker by letting him get away with things; and to everybody else by leaving out of the interaction a crucial aspect of the process of knowledge acquisition: namely, opposing critical resistance and not giving credibility or epistemic authority that has not been earned. (18-19)

¹ This is Fricker’s description, See Fricker (2007, p. 1).

Since credibility is comparative, credibility excesses given to members of some group can create epistemic injustice, testimonial injustice in particular, toward members of other groups. Medvecky makes the connection to science communication as follows:

While there are many well-argued reasons for communicating, popularizing, and engaging with science, these are not necessarily reasons for communicating, popularizing, and engaging only with science. Focusing and funding only the communication of science as reliable knowledge represents science as a unique and privileged field; as the only reliable field whose knowledge requires such specialized treatment. This uniqueness creates a credibility excess for science as a field. And since science communication creates credibility excess by implying that concerted efforts to communicate non-science disciplines as fields of reliable knowledge is not needed, then science communication, as a practice and as a discipline, is epistemically unjust. (1400)

While the principle target here is the field of science communication, any credibility excesses enjoyed by the field will trickle down to the practitioners within it. If science is being given a credibility excess, then those engaged in scientific practice and communication are also receiving such a comparative advantage over non-scientists.

So, according to Medvecky, science communication is epistemically unjust to knowers – knowers in non-scientific fields. Since these non-scientific knowers are given a comparative credibility deficit (in contrast to scientific knowers), they are wronged in their capacity as knowers.

The Argument

Medvecky's argument can be formally put as follows:

1. Science is not a unique and privileged field.
2. If (1), then science communication creates a credibility excess for science.
3. Science communication creates a credibility excess for science.
4. If (3), then science communication is epistemically unjust.
5. Science communication is epistemically unjust.

Premise (1) is motivated by claiming that there are fields other than science that are equally important to communicate, popularize, and to have non-specialists engage. Medvecky claims that not only does non-scientific knowledge exist, such knowledge can be just as reliable as scientific knowledge, just as important to our lives, and just as in need of translation into layman's terms. So, while scientific knowledge is surely important, it is not alone in this claim.

Premise (2) is motivated by claiming that science communication falsely represents science as a unique and privileged field since the concerns of science communication lie solely within

the domain of science. By *only* communicating scientific knowledge, and failing to note that there are other worthy domains of knowledge, science communication falsely presents itself as a privileged field.

As Medvecky puts it, “Focusing and funding only the communication of science as reliable knowledge represents science as a unique and privileged field; as the *only* reliable field whose knowledge requires such specialised treatment.” (1400) So, science communication falsely represents science as special. Falsely representing a field as special in contrast to other fields creates a comparative credibility excess for that field and the members of it.

So, science communication implies that other fields are not as worthy of such engagement by falsely treating science as a unique and privileged field. This gives science and scientists a comparative credibility excess to these other disciplines and their practitioners.

(3) follows validly from (1) and (2). If (1) and (2) are true, science communication creates a credibility excess for science.

Premise (4) is motivated by Medina’s (2011) work on epistemic injustice. Epistemic injustice occurs when someone is harmed in their capacity as a knower. While Fricker limited epistemic injustice (and testimonial justice in particular) to cases where someone was given a credibility *deficit*, Medina has forcefully argued that credibility *excesses* are equally problematic since credibility assessments are often comparative.

Given the comparative nature of credibility assessments, parties can be epistemically harmed even if they are not given a credibility deficit. If other parties are given credibility excesses, a similar epistemic harm can be brought about due to comparative assessments of credibility. So, if science communication gives science a credibility excess, science communication will be epistemically unjust.

(5) follows validly from (3) and (4). If (3) and (4) are true, science communication is epistemically unjust.

The Problems

While Medvecky’s argument is provocative, we believe that it is also problematic. In what follows we motivate a series of objections to his argument. Our focus here will be on the premises that most directly relate to epistemic injustice. So, for our purposes, we are willing to grant premise (1). Even granting (1), there are significant problems with both (2) and (4). Highlighting these issues will be our focus.

We begin with our principle concerns regarding (2). These concerns are best seen by first granting that (1) is true – granting that science is not a unique and privileged field. Even granting that (1) is true, science communication would not create a credibility excess. First, it is important to try and locate the source of the alleged credibility excess. Science communicators *do* deserve a higher degree of credibility in distributing scientific knowledge

than non-scientists. When it comes to scientific matters, we should trust the scientists more. So, the claim cannot be that non-scientists should be afforded the same amount of credibility on scientific matters as scientists.

The problem might be thought to be that scientists enjoy a credibility excess in virtue of their scientific credibility somehow carrying over to non-scientific fields where they are less credible. While Medvecky does briefly consider such an issue, this too is not his primary concern in this paper.² Medvecky's fundamental concern is that science communication represents scientific questions and knowledge as more valuable than questions and knowledge in other domains. According to Medvecky, science communication does this by *only* distributing scientific knowledge when this is not unique and privileged (premise (1)).

But do you represent a domain as more important or valuable just because you don't talk about other domains? Perhaps an individual who *only* discussed science in *every* context would imply that scientific information is the only information worth communicating, but such a situation is quite different than the one we are considering.

For one thing, science communication occurs within a given context, not across all contexts. Further, since that context is expressly about communicating science, it is hard to see how one could reasonably infer that knowledge in other domains is less valuable. Let's consider an analogy.

Philosophy professors tend to only talk about philosophy during class (or at least let's suppose). Should students in a philosophy class conclude that other domains of knowledge are less valuable since the philosophy professor hasn't talked about developments in economics, history, biology, and so forth during class? Given that the professor is only talking about philosophy in one given context, and this context is expressly about communicating philosophy, such inferences would be unreasonable.

A Problem of Overreach

We can further see that there is an issue with (2) because it both overgeneralizes and is overly demanding. Let's consider these in turn. If (2) is true, then the problem of creating credibility excesses is not unique to science communication. When it comes to knowledge distribution, science communication is far from the only practice/field to have a narrow and limited focus regarding which knowledge it distributes.

So, if there are multiple fields worthy of such engagement (granting (1)), any practice/field that is not concerned with distributing *all* such knowledge will be guilty of generating a similar credibility excess (or at least trying to). For instance, the American Philosophical Association (APA) is concerned with distributing philosophical knowledge and knowledge related to the discipline of philosophy. They exclusively fund endeavors related to

² Medvecky considers Richard Dawkins being given more credibility than he deserves on matters of religion due to his credibility as a scientist.

philosophy and public initiatives with a philosophical focus. If doing so is sufficient for creating a credibility excess, given that other fields are equally worthy of such attention, then the APA is creating a credibility excess for the discipline of philosophy. This doesn't seem right.

Alternatively, consider a local newspaper. This paper is focused on distributing knowledge about local issues. Suppose that it also is involved in the community, both sponsoring local events and initiatives that make the local news more engaging. Supposing that there is nothing unique or privileged about this town, Medvecky's argument for (2) would have us believe that the paper is creating a credibility excess for the issues of this town. This too is the wrong result.

This overgeneralization problem can also be seen by considering a practical analogy. Suppose that a bakery only sells and distributes baked goods. If there is nothing unique and privileged about baked goods – if there are other equally important goods out there (the parallel of premise (1)) – then Medvecky's reasoning would have it that the bakery is guilty of a kind of injustice by virtue of not being in the business of distributing those other (equally valuable) goods.

The problem is that omissions in distribution don't have the implications that Medvecky supposes. The fact that an individual or group is not in the business of distributing some kind of good does not imply that those goods are less valuable.

There are numerous legitimate reasons why one may employ limitations regarding which goods one chooses to distribute, and these limitations do not imply that the other goods are somehow less valuable. Returning to the good of knowledge, focusing on distributing some knowledge (while not distributing other knowledge), does not imply that the other knowledge is less valuable.

This overgeneralization problem leads to an overdemanding problem with (2). The overdemanding problem concerns what all would be required of distributors (whether of knowledge or more tangible goods) in order to avoid committing injustice. If omissions in distribution had the implications that Medvecky supposes, then distributors, in order to avoid injustice, would have to refrain from limiting the goods they distribute.

If (2) is true, then science communication must fairly and equally distribute *all* knowledge in order to avoid injustice. And, as the problem of creating credibility excesses is not unique to science communication, this would apply to all other fields that involve knowledge distribution as well. The problem here is that avoiding injustice requires far too much of distributors.

An Analogy to Understand Avoiding Injustice

Let's consider the practical analogy again to see how avoiding injustice is overdemanding. To avoid injustice, the bakery must sell and distribute much more than just baked goods. It must

sell and distribute *all* the other goods that are as equally important as the baked ones it offers. The bakery would, then, have to become a supermarket or perhaps even a superstore in order to avoid injustice.

Requiring the bakery to offer a lot more than baked goods is not only overly demanding but also unfair. The bakery does not count with the other goods it is required to offer in order to avoid injustice. It may not even have the means needed to get these goods, which may itself be part of its reason for limiting the goods it offers.

As it is overdemanding and unfair to require the bakery to sell and distribute all goods in order to avoid injustice, it is overdemanding and unfair to require knowledge distributors to distribute all knowledge. Just as the bakery does not have non-baked goods to offer, those involved in science communication likely do not have the relevant knowledge in the other fields.

Thus, if they are required to distribute that knowledge also, they are required to do *a lot* of homework. They would have to learn about *everything* in order to justly distribute all knowledge. This is an unreasonable expectation. Even if they were able to do so, they would not be able to distribute all knowledge in a timely manner. Requiring this much of distributors would slow-down the distribution of knowledge.

Furthermore, just as the bakery may not have the means needed to distribute all the other goods, distributors may not have the time or other means to distribute all the knowledge that they are required to distribute in order to avoid injustice. It is reasonable to utilize an epistemic division of labor (including in knowledge distribution), much like there are divisions of labor more generally.

Credibility Excess

A final issue with Medvecky's argument concerns premise (4). Premise (4) claims that the credibility excess in question results in epistemic injustice. While it is true that a credibility excess *can* result in epistemic injustice, it need not. So, we need reasons to believe that this particular kind of credibility excess results in epistemic injustice. One reason to think that it does not has to do with the meaning of the term 'epistemic injustice' itself.

As it was introduced to the literature by Fricker, and as it has been used since, 'epistemic injustice' does not simply refer to *any* harms to a knower but rather to a particular kind of harm that involves identity prejudice—i.e. prejudice related to one's social identity. Fricker claims that, "the speaker sustains a testimonial injustice if and only if she receives a credibility deficit owing to identity prejudice in the hearer." (28)

At the core of both Fricker's and Medina's account of epistemic injustice is the relation between unfair credibility assessments and prejudices that distort the hearer's perception of the speaker's credibility. Prejudices about particular groups is what unfairly affects (positively

or negatively) the epistemic authority and credibility hearers grant to the members of such groups.

Mere epistemic errors in credibility assessments, however, do not create epistemic injustice. While a credibility excess may result in an epistemic harm, whether this is a case of epistemic injustice depends upon the reason *why* that credibility excess is given. Fricker and Medina both argue that in order for an epistemic harm to be an instance of epistemic injustice, it must be *systematic*. That is, the epistemic harm must be connected to an identity prejudice that renders the subject at the receiving end of the harm susceptible to other types of injustices besides testimonial.

Fricker argues that epistemic injustice is product of prejudices that “track” the subject through different dimensions of social activity (e.g. economic, professional, political, religious, etc.). She calls these, “tracker prejudices” (27). When tracker prejudices lead to epistemic injustice, this injustice is *systematic* because it is systematically connected to other kinds of injustice.

Thus, a prejudice is systematic when it persistently affects the subject’s credibility in various social directions. Medina accepts this and argues that credibility excess results in epistemic injustice when it is caused by a pattern of wrongful differential treatment that stems in part due to mismatches between reality and the *social imaginary*, which he defines as the collectively shared pool of information that provides the social perceptions against which people assess each other’s credibility (Medina 2011).

He claims that a prejudiced social imaginary is what establishes and sustains epistemic injustices. As such, prejudices are crucial in determining whether credibility excesses result in epistemic injustice. If the credibility excess stems from a systematically prejudiced social imaginary, then this is the case. If systematic prejudices are absent, then, even if there is credibility excess, there is no epistemic injustice.

Systemic Prejudice

For there to be epistemic injustice, then, the credibility excess must carry over across contexts and must be produced and sustained by systematic identity prejudices. This does not happen in Medvecky’s account given that the kind of credibility excess that he is concerned with is limited to the context in which science communication occurs.

Thus, even if there were credibility excess, and this credibility excess lead to epistemic harms, such harms would not amount to epistemic injustice given that the credibility excess does not extend across contexts. Further, the kind of credibility excess that Medvecky is concerned with is not linked to systematic identity prejudices.

In his argument, Medvecky does not consider prejudices. Rather than credibility excesses being granted due to a prejudiced social imaginary, Medvecky argues that the credibility excess attributed to science communicators stems from omission. According to him, science

communication as a practice and as a discipline is epistemically unjust because it creates credibility excess by implying (through omission) that science is the only reliable field worthy of engagement.

On Medvecky's account, the reason for the attribution of credibility excess is not prejudice but rather the limited focus of science communication. Thus, he argues that merely by not distributing knowledge from fields other than science, science communication creates a credibility excess for science that is worthy of the label of 'epistemic injustice'. Medvecky acknowledges that Fricker would not agree that this credibility assessment results in injustice given that it is based on credibility excess rather than credibility deficits, which is itself why he bases his argument on Medina's account of epistemic injustice.

However, given that Medvecky ignores the kind of systematic prejudice that is necessary for epistemic injustice under Medina's account, it seems like Medina would not agree, either, that these cases are of the kind that result in epistemic injustice.³ Even if omissions in the distribution of knowledge had the implications that Medvecky supposes, and it were the case that science communication indeed created a credibility excess for science in this way, this kind of credibility excesses would still not be sufficient for *epistemic injustice* as it is understood in the literature.

Thus, it is not the case that science communication is, as Medvecky argues, fundamentally epistemically unjust because the reasons why the credibility excess is attributed have nothing to do with prejudice and do not occur across contexts. While it is true that there may be epistemic harms that have nothing to do with prejudice, such harms would not amount to epistemic injustice, at least as it is traditionally understood.

Conclusion

In "Fairness in Knowing: Science Communication and Epistemic Injustice", Fabien Medvecky argues that epistemic injustice lies at the very foundation of science communication. While we agree that there are numerous ways that scientific practices are epistemically unjust, the fact that science communication involves only communicating science does not have the consequences that Medvecky maintains.

We have seen several reasons to deny that failing to distribute other kinds of knowledge implies that they are less valuable than the knowledge one does distribute, as well as reasons to believe that the term 'epistemic injustice' wouldn't apply to such harms even if they did occur. So, while thought provoking and bold, Medvecky's argument should be resisted.

³ A potential response to this point could be to consider scientism as a kind of prejudice akin to sexism or racism. Perhaps an argument can be made where an individual has the identity of 'science communicator' and receives credibility excess in virtue of an identity prejudice that favors science communicators. Even still, to be epistemic injustice this excess must track the individual across contexts, as the identities related to sexism and racism do. For it to be, a successful argument must be given for there being a 'pro science communicator' prejudice that is similar in effect to 'pro male' and 'pro white' prejudices. If this is what Medvecky has in mind, then we need to hear much more about why we should buy the analogy here.

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