On Greco on Transmission*

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Suppose that Alice and Bill are lost in the woods at night. Alice knows how to navigate using the stars. Bill does not.

(1) Alice looks up at the sky. After a few seconds, she concludes that they are heading North.

(2) Bill is walking behind Alice. He hears Alice tell him: "We're heading North". Bill concludes that they are heading North.

Like many before him,[1] John Greco thinks there is an important distinction to be drawn between these two instances of knowledge acquisition.[2] Intuitively, there is a certain amount of 'work' that Alice had to do in order to come to know that they were heading North. Bill, thanks to Alice, did not have to do this same work. As Greco puts it, what is distinctive about cases like Bill's is that "the hearer comes to know by being told, and seemingly in a way that relieves the hearer of the usual burdens involved in coming to know in non-testimonial ways." (p. 8)

Following Greco, let us say that in Alice's case some bit of knowledge was 'generated'. In Bill's, in contrast, knowledge was transmitted.[3,4]

What is the difference between knowledge transmission and knowledge generation? Why, if at all, does the difference matter?

Greco takes seriously the idea that there is an important difference

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[1]E.g. Adler 1996, Welbourne 1986. For critical discussion, see e.g. Lackey 2003 and Fricker 2006, as well as the many references in Adler 2015.

[2][Reference to paper.] Unless otherwise noted, all page references are to Greco's paper.

[3]A note on terminology. Greco uses the term 'knowledge transmission' expansively, so that all cases in which knowledge is acquired via testimony are instances of transmission *in that sense*. What I'm calling here 'knowledge transmission' is what he calls 'knowledge transmission*' (p. 2). Since I will not be concerned with the general phenomenon of knowledge acquisition by testimony (whether or not it involves what Greco calls 'transmission*'), I will simply use 'knowledge transmission' to refer to the phenomenon he is interested in.

[4]It is a further question whether transmission and generation are mutually exclusive, so that this Bill's is a case of 'mere' transmission.

between transmission and generation—one that we will miss if we try to reduce knowledge transmission to knowledge generation. The difference, he argues, is that different norms govern these activities. Specifically, the norms governing knowledge transmission are less strict than those governing knowledge generation—this is what explains why 'more work' is needed in cases of generation than in cases of transmission. He then raises a challenge: is it possible to give a unified account of knowledge that respects this normative difference? On such an account, knowledge transmission and generation, even if not reducible to one another, would at least be species of the same genus. If we can't give such an account, he suggests, it's the end of epistemology as we know it.[5]

But I think we can vindicate the intuitive difference between cases like Alice's and Bill's without positing a normative difference—without, that is, thinking that knowledge transmission and generation are governed by different norms. If that's right, then the challenge Greco lays out does not arise. Or so I will argue.

In §1 I will summarize and motivate Greco's view. I then raise a challenge for Greco's proposed characterization of the difference between transmission and generation (§2) and sketch an alternative way of thinking about the difference (§3) before concluding in §4.

1

Throughout his paper, Greco relies on a particular picture in which one can find a natural joint separating instances of knowledge transmission from instances of knowledge generation. To see what this picture is, start by thinking of epistemic agents as forming 'communities'.[6] To take a concrete example, think of the community of microbiologists. A member of such a community, in virtue of being a member, can have access to a much larger stock of knowledge than she could have had on her own. She does not, plausibly, need to run statistical models on the available data—let alone gather her own data—in order to gain knowledge from reading the papers published in *Trends in Microbiology*. Merely reading the results in one of the papers is enough for her to gain the relevant bits of knowledge.

In light of the contrast between cases like (1) and (2), it is tempting to think of epistemic communities in analogy with a system of pipes designed

[5]This is the 'radical anti-reductionist' position that, according to Greco, would 'blow up the field as we know it' (p. 34).

[6]On p. 19 Greco defines an epistemic community ('loosely') as "a collection of cognitive agents, joined in relationships of cooperation, with respect to one or more information-dependent practical tasks."

to distribute filtered water. At some point, filtered water enters the system. Once in, it is distributed across the system. Some of the components of the system can be thought of as 'gatekeepers': we can imagine each inlet being fitted with a filter, so that only filtered water enters the system. Others can be thought of as 'distributors': the gate valves in the system that control the the flow of (already) filtered water from one part of the system to another.

The water pipe analogy is not Greco's, but it helps illuminate his view of the economy of epistemic communities. We can see this by noting how two key components of Greco's account fall naturally out of this picture.

First, the analogy suggests a natural division between epistemic activities within an epistemic community. On the one hand, there are *acquisition* (or *gatekeeping*) activities: those in virtue of which results make it into the journal—these include running the experiments, writing the research papers and, perhaps, the refereeing and editorial work on the part of the journal.[7] They correspond to the filtering that takes place in the inlets. On the other hand, there are *distribution* activities: those which result in more and more members of the community coming to know, in a way that depends on those results having been published in the relevant journals, the bits of knowledge that were generated by gatekeeping activities. These include dissemination in publications for non-specialists, discussion of recent work in graduate seminars, etc. These are like the gate valves in the system of pipes, in that they regulate the 'flow' of knowledge throughout the community.

Second, the analogy suggests that the two different types of activities are governed by different norms. In building our system of pipes, we want to fit the inlets with high quality filters, so that impurities are not allowed into the system. Similarly, we want acquisition activities in an epistemic community to be governed by strict norms, so that only 'high quality' information is allowed into the community. But we need not spend much on filters for the gate valves: if everything is working properly, the water going through those valves has already been filtered. Likewise, the norms governing distribution activities within an epistemic community need not be as strict as those governing acquisition activities. It should be easier (in some sense yet to be specified) for knowledge to flow from one member of the community to another than it is for it to flow into the community

[7]There is an intuitive difference between what a researcher does and what the editor does. It seems more natural to think of the former as 'acquisition' and the latter as 'gatekeeping'. Now, Greco uses the two terms interchangeably and so will I. Whatever difference there is between the two types of activities, in the present context it does not matter .

in the first place.

This is not to say that norms governing distribution should have no bite. We can see this by thinking again of the system of pipes: we might want to fit the valves with some filtering mechanism, in case the filters of the inlets stop working properly. It may be inefficient, and certainly too costly, to have the same high-quality filters we have on the inlets on every gate valve. Likewise, it may be inefficient to have knowledge transmission be governed by the same standards as knowledge generation. But is essential that if the main filters stop working, we have cheaper backup filters to protect us from the truly nasty stuff—be it epistemic or not.

This seems to correspond to the picture Greco has in mind:

> It is reasonable that the norms governing the acquisition of information should be different from the norms governing the distribution of information. Suppose we were writing the norms, or setting the standards, for these two kinds of activity. We should make it harder to get information into the system than we make it to distribute that information, once in. Again, that is because the dominant concern governing the acquisition function is quality control—we want a strong gatekeeping mechanism here, so as to make sure that only high quality information gets into the community of information sharers. But the dominant concern governing the distributing function will be easy access—we want information that has already passed the quality control test to be easily and efficiently available to those who need it. (p. 22f)

On Greco's view, then, the norms governing distribution and acquisition are importantly different. The crucial question—the one Greco invites us all to consider—is whether we can account for the different norms governing distribution activities in familiar epistemological terms.

2

If we think that the water pipe model is the right way to think about the distinction between transmission and generation, it seems reasonable to conclude that transmission and generation are governed by 'different norms and standards'. But I worry that the pipe model is misleading. My hunch is that what we are responding to when we think that transmission requires 'less work' is not so much a matter of how much 'filtering' needs to happen, but instead a matter of 'encoding'. Let me explain.

The water pipe model seems natural when we think of the contrast between (1) and (2). Alice, because of her epistemic capacities, allowed only 'good quality' information into the community. Once in there, the information could freely flow from Alice to Bill.

But it seems much less natural when we think of a different case, one in which generation does not seem so much more demanding than transmission. Suppose Carol and Diane are sharing an apartment which only has one window. Diane cannot see out the window, but Carol can:[8]

(3) Carol looks out the window and sees that it is drizzling. She comes to know that it is drizzling.

(4) Carol tells Diane that it is drizzling, and Diane then also comes to know that it is drizzling.

It is hard to think of what Carol did in (3) as in any way analogous to a 'gatekeeping' activity. At any rate, it is hard to think of what Diane does in hearing Carol say that it is drizzling as involving any less 'epistemic work', or as being 'less burdensome', than what Carol does when looking out the window. Yet, to the extent that I can make sense of the idea of knowledge being transmitted as opposed to being generated, it *still* seems that (4), unlike (3), is a case of knowledge transmission.

This raises two questions. First, how else should we understand the distinction between transmission and generation so as to encompass both the distinction between (1) and (2) and the one between (3) and (4)? Second, why does thinking of the distinction between transmission and generation in terms of 'work' seem natural in the case of (1) and (2) and not so much in the case of (3) and (4)?

3

Start with the first question. What cases like (1) and (3) have in common—and what distinguishes them from cases like (2) and (4)—is that they involve the conversion of information from a non-linguistic to a linguistic format. What Carol and Alice did, but Bill and Diane did not, was bring new information into their community in a format that other members could quickly and easily process.

Turn now to the second question. The reason it seems natural to think of Bill's coming to know that they're heading North as involving less epistemic work than usual is that the information is presented in a format that Bill can easily pick up on.[9] Alice's visual system, we might say, carries the information that they are heading North. And so does Bill's. What is special about Alice is not that she is able to filter out epistemic impurities, as it were. Rather, it is that she is able to come to

[8] Cf. Case 5, on p. 7.

[9] Please ignore the possibility of irreducibly *de se* information here.

know, by looking up at the sky, that they are heading North—and this is in part because she is sensitive to that information in the format her perceptual system makes it available in.

Bill, on the other hand, isn't sensitive to the information that his visual system makes available to him. Fortunately for him, he can rely on Alice in this case—for she can encode the information in a linguistic format. And since Bill, qua English speaker, is sensitive to that same information when encoded in linguistic format, he can come to know that they are heading North by listening to Alice's testimony. Testimony allows Bill to bypass the encoding stage that Alice first had to go through in order to come to know they were heading North.

To be sure, Bill also needs to convert the information available to his auditory system into a format that his cognitive system can handle. But this is something all of us do, all of the time, whether we get information from the world or from each other. What gives the impression that some of us are doing 'less work' than others is that we can rely on others, who are sensitive to information encoded in ways that we cannot understand, to convert that information to a format we can understand.

From this perspective, what Alice had to do in order to come to know that they were heading North did involve a certain amount of work: it required having a cognitive system sensitive to the information that was carried by her visual system. This explains why it seems as if it was harder for Alice than it was for Bill to come to know that they were heading North: unlike warblers (and dung beetles, it turns out[10]) it takes work for us to acquire the ability to process the relevant information so as to be able to navigate using the stars. But on this alternative picture we can see that knowledge generation need not involve any more work than knowledge transmission. It takes no training or effort for a dung beetle or a warbler to figure out which way North is, but that does not mean they cannot be knowledge generators: if only they could speak!

Although knowledge generation need not be harder, we can still explain why transmission often seems easier. Those of us who are less skilled are not going to be as involved in knowledge generation as people like Alice, who have acquired special abilities. But we can all be involved in knowledge transmission, just by virtue of being competent speakers of a shared language.

We can also now understand why it seems equally easy for Carol and Diane to come to know that it is raining outside. To the extent that it is easy for Diane to process the information carried by Carol's utterance, it

[10]See Dacke et al. 2013.

is equally easy for Diane to process the information carried by her visual system.[11]

In short: what distinguishes transmission from generation is not a matter of how much one needs to worry about 'quality control', but a matter of whether the information has been made available in a format that all members of a community can understand.

On this way of thinking about it, acquiring knowledge by testimony (at least in the putative instances of knowledge transmission) is much like acquiring knowledge of the ambient temperature by looking at a thermometer. What makes the putative cases of knowledge transmission special is not that the gained bit of knowledge depends on there being some other agent who has that knowledge. To the extent that acquiring knowledge from a member of one's epistemic community requires 'less work', it is not because one need not worry about impurities—in other words, it is not because the norms governing transmission activities are in any sense less stringent—but rather because what one comes to know comes in an easy to read format.

An alternative metaphor suggests itself. Imagine not a system of water pipes, but a complex digital audio system whose input is an analog source that has been converted into digital format. Perhaps each of the components has a built-in analog to digital converter. The gatekeeping activities would be those in which an analog-to-digital converter is activated. The distribution activities would be those in which a digital signal is simply sent from one component to another. On this picture, gatekeeping is not a matter of quality control but rather a matter of putting the information in the right sort of format. Whenever a signal travels through the system, one can worry about noise. But worries about noise will arise for both distribution *and* gatekeeping activities. Whatever difference there is between gatekeeping and distribution activities, it is not a difference in kind.

4

Greco offers a suggestive picture of the difference between knowledge generation and transmission—one on which intuitive differences between cases are reflected in substantive normative differences between the two phenomena. Greco's picture, however, only seems natural when we focus on some

[11] See Dretske 1981 for a discussion of the role that information flow can play in epistemology. See Graham 2000 for an information-theoretic account of knowledge by testimony. Neither, as far as I know, appeals to the point I make about encoding to explain the intuitive difference between knowledge transmission and generation.

of the cases, and the intuitions he wants to vindicate can, when properly understood, be explained by an alternative picture—one that posits no normative differences between transmission and generation. I do not take myself to have argued that the picture I sketch is better than Greco's. But I hope to have done enough to convince you that understanding the difference between transmission and generation in normative terms is not forced upon us by the phenomena.[12]

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