



Hinges in the knowledge economy. on greco's common and procedural knowledge

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Received: 21 June 2022 / Accepted: 11 March 2023
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Abstract

In his “Common knowledge” (2016) and *The Transmission of Knowledge* (2021), John Greco proposes a novel account of hinge propositions. Central to it is the idea that they are items of common knowledge – that is, of knowledge that is already present in the system, freely available to anyone, without having to figure it out by oneself or having to be taught it by others. As such, they are not subject to any quality control at all. Furthermore, they figure in a subject’s cognitive economy as items of procedural, mostly tacit knowledge, which is operative in the execution of actions and various cognitive tasks. After introducing the basics of Greco’s account, I consider it from a systematic and historical perspective and argue that, while instructive, it is wanting in several respects. Whereas some, among the myriad hinges Wittgenstein considers in *On Certainty* (1969), may be known, there is no need to make them the content of a different kind of knowledge. Furthermore, we cannot have (evidential) justification and, *a fortiori*, knowledge of at least some other propositions that Wittgenstein considered as hinges. In passing, I also show that Greco’s account aligns much more with G. E. Moore’s ideas about the epistemic status of his truisms in “A defence of common sense” (1925) and the premises of his celebrated “Proof of an external world” (1939), than with Wittgenstein’s account of hinges and their epistemic significance in *On Certainty*.

Keywords J. Greco · Common knowledge · Hinge epistemology · G.E. Moore · L. Wittgenstein

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1 Introduction

In his “Common knowledge” (2016) and *The Transmission of Knowledge* (2021), John Greco proposes a novel account of hinge propositions. Central to it is the idea that in the knowledge economy,¹ knowledge items can play three distinct roles. They can either be newly generated knowledge, which someone has found out for oneself. Or they are items of transmitted knowledge, which are passed on to other users through testimony. Or else, they may be items of common knowledge – that is, of knowledge that is already present in the system, freely available to anyone, without having to figure it out by oneself or having to be taught it by others. Depending on their role, these knowledge items are subject to more or less stringent “quality checks”, or to no quality control at all, like in the case of common knowledge. Hinges, for Greco, belong in this third category. Thus, they are known, and yet are known neither because one has found them out for oneself, nor because one has received them through testimony. Furthermore, they figure in a subject’s cognitive system as items of procedural, mostly implicit or tacit knowledge, which is operative in the execution of actions and various cognitive tasks.

In this paper, I first introduce the basics of Greco’s account (Section 1). I then consider it from a systematic and historical perspective and argue that, while instructive, it is wanting in several respects (§§ 2–5). In particular, it is instructive with respect to the idea that some, among the myriad hinges Wittgenstein considers in *On Certainty* (1969), may be known. However, when they are, and contrary to what Greco maintains, there is no need to make them the content of a different kind of knowledge. Furthermore, Greco’s account misses a crucial point that Wittgenstein and most hinge epistemologists after him have been emphasizing all along. Namely, that we cannot have (evidential) justification and, *a fortiori*, knowledge of at least some of the propositions that Wittgenstein considered as hinges in *On Certainty*, which I label “hinges+”. In passing, I show that, in fact, Greco’s account aligns much more with G. E. Moore’s ideas about the epistemic status of his truisms in “A defence of common sense” (1925) and the premises of his celebrated “Proof of an external world” (1939), than with Wittgenstein’s account of hinges and their epistemic significance in *On Certainty*.

2 Hinges and three theoretical desiderata

Greco summarizes what he takes to be the special features of hinges thus (2016, pp. 238–240; cf. 2021, p. 112):

¹ By “knowledge economy” I mean the production, the presence, and transmission of knowledge. Greco too thinks of items of knowledge as either produced (by experience or reasoning), or as transmitted (by testimony), or else, as already present in the knowledge system, freely available to anyone. In this sense knowledge items are like goods in an economic system, since they are either produced (like artifacts), or passed on (like goods passed on through selling or legacy), or else, freely available to anyone (like air, for Greco, which is at subjects’ disposal without their having to produce or inherit it).

- a) Hinge propositions ... are in an important sense held in common: “There is something universal here; not just something personal” (OC 440); “The truths which Moore says he knows, are such as, roughly speaking, all of us know, if he knows them” (OC 100).
- b) Doubting them does not make sense: “if someone doubted whether the earth had existed a hundred years ago, I should not understand” (OC 231).
- c) Relatedly, they are as certain as anything that could be said in favor or against them. “I want to say: my not having been on the moon is as sure a thing for me as any grounds I could give for it” (OC 111).
- d) ... They are odd to assert. As such, they are not (typically) expressed, even in thought.
- e) It is also odd to assert that one knows them, or that one does not know them. Both “knows” and “does not know” ... make no sense here.
- f) We don’t seem to arrive at them by pursuing some line of thought, or by having good grounds. Neither do we learn hinge propositions by being taught them.
- g) Rather, they are a kind of background for judging what is true or false.
- h) They have a different functional profile from beliefs proper, as they are not reasons-responsive (see Greco 2021, p. 107).

While we will need to consider further feature (f) and, to some extent, feature (d), we can provisionally accept this characterization.

According to Greco, any suitable account of hinges needs to explain the following three problems (2016, pp. 240–241, cf. 2021, p. 107):

The Assertion Problem Why are Hinge Propositions *themselves* odd to assert? Why is it odd to assert that one *knows* them (or that one does not know them)? Why does it *seem wrong* to assert that one knows them (or that one doesn’t know them?)

The Epistemic Problem If we do know hinge propositions, then *how* do we know them? And if we do know them, why are they *so* certain? Why is their epistemic status so high, even compared to other knowledge?

Greco then refines the latter problem as follows (2016, p. 242; cf. 2021, pp. 108–9):

The Epistemic Problem Refined:

1. Any item of knowledge must be either *generated for oneself* via non-testimonial sources or *transmitted from others* by means of testimony.
 2. Knowledge of hinge propositions (at least in the hard cases) is not *generated for oneself*, since one does not arrive at such propositions “by pursuing some line of thought” or “working it out.”
 3. Knowledge of hinge propositions is not *transmitted* by means of testimony, because such propositions are not typically asserted.
Therefore,
 4. There is no knowledge of hinge propositions
- Finally, according to Greco, there is one last problem any account of hinges should give an answer to. Namely (2016, p. 242; cf. 2021, p. 109),

The Specialness Problem Suppose that you do give an account of our knowledge of hinge propositions in traditional terms. But then you will have missed what is special about hinge propositions; i.e. you will have missed why they are special and interesting epistemically.

The crux of the matter, as we shall see in the following, is

- Whether all examples of hinges, as presented by Wittgenstein, actually comport with premises (2) and (3) of the Epistemic Problem Refined;
- Whether those hinges that comport with them can be considered the object of knowledge.

Let us consider them in turn.

3 Easy knowledge and testimonial knowledge of hinges

Greco himself notices that there is an important competitor to his preferred account of hinges' knowledge in terms of common and procedural knowledge (I will return to that in §§ 3, 5). Namely, that

... [O]ur knowledge of hinge propositions is *easy knowledge*, by the usual routes (emphasis added). It is entirely the result of obvious perception and memory, and easy inferences. We just don't *notice* the process by which we arrive at such knowledge. We may consider two versions. On the first, we already have such knowledge early on, as we implicitly extend and fill in what we explicitly know. On the second, we come to have such knowledge as soon as the right question is raised, by means of easy inference from what we already know. (2016, p. 243)

Quite clearly, it seems to me, some of Wittgenstein's hinges are just like that. Importantly, Greco too notices that some hinges may be easily known (2016, p. 241; cf. 2021, p. 108). However, his list of hinges for which that cannot be the case significantly differs from mine.²

Consider how we know that cats don't grow on trees, for instance. An overwhelmingly plausible answer is that we know it by means of something like the following easy inference: "All cats are generated by cats"; "Trees aren't cats"; therefore "Cats don't grow on trees". Where the main premise is an empirical generalization that we get through experience and testimony. Thus, such a hinge would be known in an easy

² In particular, it includes "Every human being has parents", "Cats don't grow on trees", "Motor cars don't grow out of the earth", which are all cases of easy knowledge in my opinion. The hard cases we hold in common are "The earth has existed for a long time (before my birth)", "What has always happened will happen again"; "There are physical objects". A mixed case is "The earth is a body on whose surface we move. [Easy knowledge on my account]. And it no more suddenly disappears or like than any other solid body", where the second conjunct is inferred from "Physical objects do not suddenly disappear out of their own accord" and "The earth is a physical object". The first premise is a 'hard' hinge, to use Greco's terminology; or a *de jure* or transcendental hinge, to employ the more common terminology in use among hinge epistemologists. Cf. fn. 4.

way. There is no need to postulate that it be known altogether differently, as Greco suggests.

One might object that the premise of this easy inference – “All cats are generated by cats” – is no better known than the conclusion – “Cats don’t grow on trees”. Yet, this seems weird, for we could easily think of other possible conclusions which would be similarly inferred from that premise, while being less well known than the latter. For instance, “Cats don’t grow on motorcars/airplanes/space rockets”, etc. That is, we acquire very early on knowledge of the fact that (so far at least in the actual world) cats have been generated solely by cats. The way we acquire such a generalization is part and parcel of the kind of upbringing we are subject to. In a rural environment, for instance, it may be due to empirical, repeated exposure, and testimony from elder members of the community. In an urban environment, in contrast, it may be due to being told by others, to watching documentaries, or to reading or being read books, etc. Once that generalization is firmly in place, then anything that contradicts it, like “Cats grow on trees/motorcars/airplanes/space rockets”, etc. is excluded. The above-mentioned inference is just a way to rationally motivate such an exclusion. Whether it happens in one’s mind or can simply be offered *ex post* as a motivation for the exclusion is not relevant from an epistemic point of view, but at most, from a psychological one. The relevant point is that the generalization “All cats are generated by cats” is acquired and the conclusion “Cats don’t grow on trees/motorcars/airplanes/space rockets”, etc. is derived from that.

Here are more examples. How do I know that I have two hands, or that I have never been on the Moon? Well, through repeated experience and memory, such that nothing I am aware of would be able to call that into doubt. How do I know that my name is ‘NN’ or that I was born in ..., in 19XX? Not so much through direct experience, but through testimony and memory: I have always been called thus, I have seen documents that attest to that and to my date and place of birth, and nothing I am aware of would be able to call that into doubt. Thus, once again, these hinges would be known in an easy way.

Furthermore, it is quite plain – and indeed this is something that Wittgenstein too stresses throughout OC (160–161, 599–605) – that several of our hinges are acquired through testimony. For instance, how do people know that water boils at 100 °C (OC 293, 567)? Clearly because they were so told, most likely in school. They did not reason to that, nor did they find out by themselves by making experiments. They took it from others, who explicitly imparted that much to them. Similarly, they got it from others that the Earth isn’t flat (OC 85), and that the Sun isn’t a hole in the vault of heaven (OC 104).³

Hence, there are plenty of hinges for which premises (2) and (3) of the Epistemic Problem Refined are false. In all these cases, I would claim that the relevant propo-

³ If one allowed for mathematical hinges, then the same would hold for “ $12 \times 12 = 144$ ” (OC 43, 447, 651, 653–4), which is a proposition we clearly learned in school. On mathematical hinges, see Coliva (2020). For a different position, see Moyal-Sharrock (2004) and Martin (2022).

sitions – whether we want to call them “hinges” or not – are known.⁴ This simple observation opens a host of important theoretical questions; most prominently,

- Are all hinges acquired through easy knowledge and/or testimony?
- If so, are they all epistemically straightforward, such that there is no Specialness Problem for them?

If the answer to the former question is “yes”, this would put considerable pressure on Greco’s account, since he wants to claim that hinges are known, yet that their knowledge is neither acquired through first-hand experience or reasoning, nor through testimony. Rather, they are to be found in the knowledge economy for free, at anyone’s disposal without prior checking of their epistemic credentials. That is, they are items of a different kind of knowledge, that he dubs “common knowledge”, which gets further specified as an instance of procedural knowledge (see §§ 3, 5).

A negative answer to that question may however be attempted, in which case one should fill it out and demarcate quite clearly which hinges would be acquired through neither easy knowledge nor testimony. Surely, (at least most of) Greco’s favorite examples do not constitute even the beginnings of such a differential explanation.⁵

However, and this is where things get interesting, even if at least some hinges may be arrived at through reasoning or gotten through testimony, there may still be a Specialness Problem, for at least *some* other hinges. Let’s see this idea in more detail.

Consider “The earth has existed for a very long time”. How have we acquired it? Well, we know many things about history, prehistory, and geology, which we have mostly acquired through testimony. From any subset of them, we could then infer that the earth has existed for a very long time. It would thus seem that that hinge too is known by means of a mix of testimony and inference. However, a moment reflection suffices to realize that unless we take that hinge for granted, everything we take ourselves to know in the domain of history, prehistory, or geology, and from which we would infer to it, would simply cease to be justified and therefore known. That is, if we did not take for granted that the earth has existed for a very long time and started considering it a live possibility that it could have popped into existence just a few years ago instead, replete with all the fossils we have found on it, we would have no reason to take the latter as evidence of the presence of certain creatures, such

⁴ In the hinge epistemology literature, it is common to distinguish between *de facto* (or local) and *de jure* (or transcendental/universal) hinges (Moyal-Sharrock 2005, Chaps. 5, 7; Coliva and Palmira 2020, 2021; Boncompagni 2021). For some hinge epistemologists, only the latter are hinges properly so regarded, as they are the only ones which need to stay put in order for our inquiries to be possible; whereas the former are more like well-entrenched, commonsensical beliefs, that may be called into question without thereby forcing us to give up on our inquiries. At most, *de facto* hinges function as norms in the sense that they may be used to gauge a subject’s cognitive well-functioning, and/or their level of acculturation within a specific community.

⁵ Cf. fn. 2. Greco’s favorite examples are: “Every human being has parents” (OC 211); “Motor cars don’t grow out of the earth” (OC 279); “Cats do not grow on trees” (OC 282). As I claimed in the main text, these hinges seem to be known in an easy way; that is, through repeated experience, memory, inference, and testimony. A different case can be made for “The earth existed long before my birth” (OC 233), but, as I will argue, this hinge proposition does not support Greco’s own account in terms of common knowledge.

as dinosaurs, millions of years ago. Thus, what we infer that hinge from – e.g. “This fossil of a dinosaur is over 200M years old”,⁶ thus “There were dinosaurs on the earth at that time”; therefore, “The earth has existed for a very long time” – is justified or known only to the extent that that very proposition – “The earth has existed for a very long time” – is taken for granted.

The moral to draw, I submit, is not so much that we need a new category of knowledge to account for the epistemic status of those hinges that are in fact known. The usual kinds of knowledge we are all familiar with – such as knowledge by experience and memory, through inference, or through testimony – are more than enough to account for how we know these hinges.

Rather, we need to realize, with Wittgenstein, and contrary to what G. E. Moore held regarding his truisms and the premises of his proof, that *at least some* of the myriad propositions the former considers as hinges in OC, play an altogether different epistemic role. They are the ungrounded – yet stable and unshakeable – presuppositions of all, or at least many, of our inquiries. Call such hinges that are ungrounded/able presuppositions of inquiry “hinges+”.⁷ And once it is realized that inference may not transmit knowledge or justification to them – i.e., because they are the conclusions of inferences which need to presuppose them in order for their premises to be known or justified in the first place –, then the idea that at least hinges+ are epistemically discontinuous with other items of knowledge we may and do have, including some of the propositions that Wittgenstein himself considers as hinges in OC, becomes tempting. For if inference does not transmit any epistemic “good”,⁸ in such cases, and the conclusion – a hinge+ – needs to be presupposed in order for the

⁶ This proposition is not itself a hinge either for me or for Wittgenstein. Rather, it is an empirical proposition.

⁷ In my previous work on hinge epistemology, I have tended to restrict the propositions that count as hinges to those that play such a presuppositional role in our inquiries; namely hinges+. As we saw in fn. 2, 4, some hinge epistemologists prefer to distinguish between *de facto* (or local) and *de jure* (or transcendental or universal) hinges. Hinges+, as understood here, align with *de jure* (or transcendental) hinges, as referred to by these hinge epistemologists. My terminology, however, does away with the connotations carried by “transcendental” and “*de jure*”, which may be problematic. For instance, “the Earth has existed for a very long time” is not as general and universal, with respect to empirical inquiry, as “there are physical objects”. It is not, therefore, a condition of possibility of *any* empirical inquiry. Nor is it a law, either of physics or of a legal system. Still, it is a condition of possibility of at least many empirical inquiries, and, in that sense, it plays a normative rather than an empirical role. Also, it cannot be epistemically supported by evidence, for that evidence owes its justificatory role to the prior assumption of such a hinge. By “hinge+” I therefore refer to those hinges that play such a role and are not derived from or grounded in experience and/or testimony. Hinges+ should not be confused with Pritchard’s (2015) notion of *über hinge*, which is the “hinge” – if one is inclined to so regard it – that we cannot possibly be massively mistaken. Hinges+ have a more specific content, as we have seen by looking at some examples.

⁸ This is the well-known property of “transmission failure” (for an account, see Wright 1985 and for a distinction between different kinds of transmission failure, see Coliva 2015, chapter 3) that many inferences involving hinges, and, in particular, hinges+, as conclusions have. In Coliva (2010a), I consider at length the distinction between inferences that merely allow us to draw out a conclusion which is implicit in their premises, and inferences that offer epistemic support for the conclusion. In Coliva (2012, 2015, 2020, chapters 2–3) I also consider at length the distinction between transmission failure and the principle of closure for knowledge/justification under known entailment. On most hinge epistemology accounts, when hinges – and especially hinges+ – figure as conclusions of inferences, knowledge/justification of the premises does not transmit to the conclusion. That is, the inference does not epistemically support the conclusion, which in fact needs to be presupposed for the premises to be known/justified in the first place.

premises of the inference to possess some epistemic “good”, and there is no way in which such an epistemic “good” could itself be acquired – not through direct experience, for none of us was there long ago; not through inference, since inference does not confer justification or knowledge in such cases; nor through testimony, since the testimonial source could have not acquired knowledge of it either through direct experience or through inference in the first place either – then that hinge+ starts looking epistemically special.

I will not review here the various ways in which hinge epistemologists consider them epistemically special. The common point is that they are neither known nor evidentially justified.⁹

4 Hinges and common knowledge

Taking his lead from Edward Craig (1990, p. 11), who suggested that the “concept of knowledge is used to flag approved sources of information”, Greco (2016, p. 246) claims that “the concept of knowledge serves to govern the acquisition and distribution of actionable information (information that can be used in action and practical reasoning) within a community of information sharers”.

According to him, there are at least “two kinds of activity governed by the concept of knowledge”. Namely, “activities concerned with *acquiring* or *gathering* information, or getting information into the community of knowers in the first place”; and “activities concerned with *distributing* information throughout the community of knowers; that is, there will be mechanisms for distributing information that is already in the social system” (2016, p. 246).

A subject catches sight of a new species of bird and inserts that piece of information – that proposition, if you will – into the knowledge economy.¹⁰ In this case, the “quality check” needs to be particularly stringent, to make sure that the system does not get infected with misinformation – with false propositions, which may become the content of subjects’ beliefs. Was the perceiver seeing correctly? Is the perceiver knowledgeable about birds? Is the perceiver sincere? Are there independent reports of that or similar observations? etc. are only some of the pertinent questions we need to ask and find an answer to before admitting and/or retaining that piece of information into the knowledge economy.

In contrast, most testimonial cases, for Greco, subserve the second function.¹¹ That is, they distribute – or disseminate – information that has already entered the

Only some hinge epistemologists, however, also think that that involves a failure of Closure (for opposite views on the matter, see Coliva 2015, 2022; Wright 2014, Pritchard 2015).

⁹ For a review of the various version of hinge epistemology Coliva (2022, chapter 1, 2). See also Coliva, Moyal-Sharrock and Pritchard (2023) for an exposition and comparison between the authors’ versions of hinge epistemology. see Coliva (2022, chapter 1, 2). See also Coliva, Moyal-Sharrock and Pritchard (2023) for an exposition and comparison between the authors’ versions of hinge epistemology.

¹⁰ The example is mine.

¹¹ Some fulfill the former, though. For there are cases in which an item can enter the knowledge- economy only based on a subject’s testimony. This is the case, for instance, when we must trust a witness of a crime to include within the system the information that the crime was committed by a given person. In that case,

knowledge economy. For instance, once it has been thoroughly verified that the perceived bird belongs to a new species, that information can circulate within the system to reach those who need it, without stringent checks on the sincerity and competence of those who pass that information on to other users, such as ornithologists, textbooks, biology teachers, bird-watching aficionados, etc.

Yet, there is a third function the concept of knowledge may play, according to Greco. That is, it can indicate “common knowledge”. The latter “would be analogous to common or public property – roughly speaking, everyone [by virtue of membership in the epistemic community] gets to use it for free. On this extended model, there is knowledge that you produce for yourself, knowledge that someone gives you, and common knowledge that is available for everyone.” (common knowledge that is available for everyone, p. 248; cf. Greco 2016, pp. 104, 110) Furthermore, common knowledge “plays a particular role in the information economy. Specifically, common knowledge is knowledge that we are happy to ‘spot’ for free. We are happy to grant it, and take it for granted” (2016, p. 249).

According to Greco, common knowledge is either “knowledge so easy to gain that everyone either has it or should have it”, or “knowledge that has been so long held that everyone is aware if it or should be aware of it” (2016, p. 249). Examples of the first kind may be “Every human being has two parents”, or “I have hands”, while examples of the latter kind may be “The Earth isn’t flat”, “The sun isn’t a hole in the vault of heaven”, or “Water boils at 100 °C”. “The idea is that such knowledge can be freed up for common use without further concern for quality control. It is so well known, and so widely known, that we are happy to grant it to everyone” (2016, p. 249).

Notice, however, that while we may have this information circulate freely within the system, it is obvious that the way it got into it is in one or more of the usual ways reviewed in § 2 – namely through observation, memory, inference, or testimony. Thus, it is once more apparent that if hinges are known, we do not need to postulate the obtaining of a different kind of epistemic method to account for their presence within the information system. Furthermore, even when the information is already present within the system and is not something one finds out by oneself, like in the case of “The Earth isn’t flat”, or “Water boils at 100 °C”, the way it circulates within the system is clearly through testimony.

In particular, in *On Certainty* there are plenty of hinges we are taught, by teachers and textbooks. Furthermore, Wittgenstein assigns an important role to trust in teachers and textbooks in the process of acquisition of hinges (OC 160–161, 599–605) – something which would hardly make sense if hinges were not acquired from members of our community and were already there for us to simply avail ourselves of them.¹²

This is not just a point about how to read *On Certainty*. Rather, it poses an interesting question about how we get access to this “common repository” of knowledge. Take air: it is common property in the sense that one has just to start breathing to

testimony is subject to a more thorough quality check, aimed at establishing whether the witness is sincere and knowledgeable with respect to the crime under investigation.

¹² On the role of trust in the acquisition of hinges, see Coliva (2023).

access it. Yet, with hinges it seems different: we don't have immediate access to the fact that water boils at 100°C, or that the Earth isn't flat, or that the Sun isn't a hole in the vault of the heaven. Rather, we need to get this information from someone or from textbooks. We don't even get it "for free" that all human beings have (two biological) parents, or that cats don't grow on trees. Rather, we are part of a community that passes on biological knowledge through education and therefore through teachers and textbooks. These more specific pieces of knowledge are a consequence of that training and upbringing, or of the "world picture" that has been transmitted to us.¹³

Thus, at most, we can admit that, when they are known, hinges amount to common knowledge in the much more limited sense that they circulate *freely* – that is, with no quality checks regarding their content or the epistemic credentials of those who pass them on – due to their being either specimens of easy knowledge or of historically sedimented knowledge.

At any rate, and contrary to what Greco states, we need not deny the first premise of the Refined Epistemic Problem: "that any item of knowledge must be either generated for oneself via non-testimonial sources or transmitted from others by means of testimony". Thus, when hinges are known, and are the object of common knowledge properly so regarded, they are far from being epistemically special.

As anticipated in § 2, only hinges+are epistemically special, because of their unique role in the production of reasons and knowledge. As we saw, inference doesn't transmit justification and knowledge to them. Furthermore, even if we get them through testimony, testimony does not give us knowledge of them, since they are not known in the first place, and if something is not known in the first place, being passed on through testimony does not make it any more known or justified. Finally, since common knowledge is not a different method for knowledge acquisition, but at most signals the free circulation of a piece of information within the system, the moral to draw is that, while hinges+may freely circulate in the knowledge economy, they are not themselves items of knowledge.

Yet, they are epistemically special because despite not being known or justified, they aren't any less certain. They are the hinges – the ungrounded presuppositions – of all our inquiries, which are kept fixed by what rotates around them. They are what needs to stay put for reasons for or against any epistemic claim to be possible. In that sense, hinges+are constitutive of the very possibility of there being epistemic reasons for or against other propositions. Hence, hinges+freely circulate within the knowledge economy, not because they belong to the category of common knowledge, but because they make justification and knowledge possible in the first place.

¹³ In fact, now there are human beings that have a modified genome, with DNA replaced from a third subject; there are also human beings who have been originated in a lab; and there are cloned animals, that in a sense don't have two biological parents. Furthermore, kids allow for the possibility that cats grow on trees, or out of plants, when they make use of imagination, and it may well be that in the future it will be possible for animals to grow out of trees. Notice that Wittgenstein was very interested in these possible changes.

5 The Assertion Problem and the ideal of theoretical unity

According to Greco, his account of hinges as items of common knowledge has the advantage of solving the Assertion Problem (see § 1). For “we can adopt the Gricean line that assertions of hinge propositions are true but inapt. Precisely because hinge propositions are known to be true by everyone, asserting them adds nothing informative to a conversation” (2016, p. 249; cf. 2021, pp. 111–112).

Maybe that works for hinges if we admit that there are some that are known. Yet, it is interesting to note that this admission is deeply at odds with Wittgenstein’s own account of hinges. For there is overwhelming evidence that for him hinges were never known.¹⁴ By contrast, this is precisely the explanation G. E. Moore gave of why his truisms would make for odd assertions, particularly if they were prefixed by “I know”. Here is an interesting excerpt from a letter to Norman Malcolm (Moore 1949, p. 213–214):

You wanted then, and want now, to say that my use of the expression [“I know that *p*”] was a “misuse” & “incorrect”; but the only reason you give for saying so is that I used it *under circumstances* under which it would not ordinarily be used, e.g., under the circumstances that there neither was at the moment nor *had been just previously* any doubt whether it was a tree or not. But that I used it under circumstances under which it would not ordinarily be used is no reason at all for saying that I misused it or used it incorrectly (...). I was using it *in the sense* in which it is ordinarily used (...). The argument I have just given is an argument designed to show that I was using it in the ordinary sense, though not under any ordinary circumstances.

Moore then continues (1949, pp. 215–216):

[Y]ou were wrong also in saying that I was using the words in such a way that they “did not make sense”. It seems to me that you have been misled into saying this latter partly at least through having failed to notice an ambiguity in our use of “senseless”. If a person, under circumstances in which everybody would see quite clearly that a certain object was a tree, were to keep repeatedly pointing at it & saying “That’s a tree” or “I know that’s a tree”, we might well say that that was a senseless thing for him to do, & therefore, in a sense, a senseless thing for him to say (...) – meaning (...) that it was a sort of thing which a sensible person wouldn’t do, because, under those circumstances, it could serve no useful purpose to say those words. But this is an entirely different thing from saying that the words in question don’t, on that occasion, “make sense”, if by this is meant something which would follow from the proposition that they were not used in their ordinary sense. It is perfectly possible that a person who uses them senselessly, in the sense that he uses them where no sensible person would use them because, under those circumstances, they serve no useful purpose, should

¹⁴ See Coliva (2010b, 2022, chapter 3) for a reconstruction of the hinge epistemology literature on this point.

be using them *in their normal sense* & that what he asserts by so using them should be *true*.

Wittgenstein, in contrast, and in agreement with Malcolm on that,¹⁵ did not give a Gricean explanation of the oddity of asserting hinges. His point was more radical. Accordingly, if an assertion does not serve any purpose, it merely appears to be meaningful. That is, we tend to project onto it the meaning those words have when uttered in contexts in which they do serve a purpose, and so we think the assertion is meaningful and possibly true, while simply not contributing to some shared pragmatic goal. Yet, this is merely an illusion. The assertion is in fact meaningless, not meaningful but pragmatically odd.¹⁶

Furthermore, asserting that one knows hinges, according to Wittgenstein, could not be based on the usual criteria that govern knowledge-assertions, such as having found out after an investigation, having telling grounds for what is claimed to be known, etc. Conversely, we could have no reasons to say that they are not known either. Hence, asserting that one knows hinges, or that one doesn't, would be equally meaningless, and not just pragmatically improper, according to him.¹⁷

If, however, the real discovery of OC are hinges+, since they cannot be known, their assertion cannot be odd because it pragmatically makes no sense to assert something that is known to everyone. Of course, this does not oblige us to adopt Wittgenstein's more radical account,¹⁸ but it helps us see that as appealing as Greco's account in terms of common knowledge might be, it is not to be preferred because it would explain the oddity of asserting hinges+. At most, it would explain the oddity of asserting those hinges that are known, if indeed we want to consider them hinges, rather than ingrained and entrenched empirical propositions, *à la* Quine. Yet, even in this case, Greco's response to the Assertion Problem, while in keeping with Moore's, as we saw, would be at odds with Wittgenstein's.

Finally, Greco thinks his proposal is at disadvantage with respect to theoretical unity. As he puts it (2016, p. 250; cf. 2021, p. 112),

One disadvantage of the account, it might be argued, is its lack of unity regarding the nature of knowledge. Specifically, it proposes that there are different kinds of knowledge, subject to different norms and standards. This lack of unity in the account, it might be argued, should be considered a theoretical vice. On the other hand, unity is regained in the broader unity of the information economy model.

¹⁵ For a reconstruction of the influences and borrowings on this issue between Wittgenstein and Malcolm, see Coliva (2010b, chapter 1).

¹⁶ See Coliva (2010b, chapter 2) for a development of this point.

¹⁷ See Coliva (2010b, chapter 2) for a development of this point.

¹⁸ For instance, one could tweak the Gricean account by stating that it is pragmatically infelicitous to assert what, as a matter of fact, is most often a tacit presupposition of our epistemic practices.

As I have argued elsewhere,¹⁹ Wittgenstein was an invariantist about propositional knowledge. Yet he thought that under a superficial uniformity, different assertions of “I know” would mean different things, varying from stating the obtaining of an epistemic relation between a subject and a proposition or a fact, to expressing a grammatical remark, in which case we should more perspicuously express ourselves by saying “Here a mistake/doubt is impossible”; up to producing a philosophical nonsense by making the impossibility of doubt or mistake a function of a subject’s privileged epistemic position, when in fact it is a function of the hinge-role played by the propositions which are said to be known. Not to mention the fact that, as Wittgenstein notices in *Philosophical Investigations* (I, 78), in some circumstances “I know” could mean “I am able to”. In such a case we would be facing instances of practical knowledge or know-how, which Wittgenstein never considered reducible to cases of propositional knowledge or know-that.

Thus, on the one hand, he thought that different methods notwithstanding, we can often know truths – that is, have propositional knowledge. Yet, on the other, theoretical unity was far from being a goal of his, or even a theoretical virtue to be pursued, in his opinion. On the contrary, he thought that by being guided by it, one could easily be led astray and end up thinking that the certainty of hinges was of an epistemic kind, or that knowledge-how should be reduced to knowledge-that. It is not by chance that for a while Wittgenstein toyed with the idea of using King Lear’s line “I’ll teach you differences” as a motto for the *Philosophical Investigations*.²⁰

6 From common knowledge to procedural knowledge

As we saw in § 3, Greco claims that “the concept of knowledge serves to govern the acquisition and distribution of actionable information (information that can be used in action and practical reasoning) within a community of information sharers”.

This, however, poses a problem for his account of hinges in terms of common knowledge. For, by Greco’s own admission, hinges are typically not spoken, and probably not even thought of. As Wittgenstein puts it in OC 159:

As children we learn facts; e.g., that every human being has a brain, and we take them on trust. I believe that there is an island, Australia, of such-and-such a shape, and so on and so on; I believe that I had great-grandparents, that the people who gave themselves out as my parents really were my parents, etc. This belief may never have been expressed; even the thought that it was so, never thought.

Thus, hinges do not seem to figure in practical reasoning, neither implicitly nor explicitly. Here is how Greco puts the problem (2016, pp. 251–252; cf. 2021, p. 113):

¹⁹ See Coliva (2010b, chapter 2), and Coliva (2022, chapter 3).

²⁰ I will return to the issue of theoretical unity in § 5.

One might think that hinge propositions are used as suppressed or implicit premises in practical reasoning. For example, suppose that I expect to see Danièle in the room but then don't find her there when I look. I might reason as follows: "I don't see Danièle in the room, so she must have stepped out." In so reasoning, am I relying on some hinge proposition, serving as an implicit premise, for example *that physical bodies don't suddenly disappear*? Or suppose that I see some kittens in the yard, and I infer that the neighbor's cat must have had her litter. Do I rely on the implicit premise *that cats don't grow on trees*? That seems implausible. More likely, my reasoning is devoid of any such premises, even implicit ones. Upon not finding Danièle in the room, I infer directly that she has stepped out. Upon seeing the kittens in the yard, I infer directly that my neighbor's cat (or some other cat) has had a litter. The reliability of these and other inferences are [*sic*] contingent, guaranteed by external facts about the environment and the laws of nature rather than a battery of unnoticed assumptions. That is at least a plausible account of our inductive reasoning, and one that undermines the motivation for seeing hinge propositions as implicit premises in enthymematic reasoning. But then, as suggested above, this constitutes a problem for the present account. For if we don't need hinge propositions for premises in our reasoning, or if we only rarely need them for such, then we lose a major motivation for locating them in a category of available common knowledge. Even worse, it becomes mysterious why they should be included in such a category at all, since their relationship to practical reasoning and action has now been severed.

Greco proposes to solve this problem in *The Transmission of Knowledge* by making hinges the content of procedural knowledge. Procedural knowledge is "knowledge exercised in the performance of a task" (2021, p. 114). There are four ways in which procedural knowledge may be operative in the performance of a task (see Greco 2021, pp. 114–115):

- It can manifest as explicit knowledge of a rule;
- It can be understood on analogy with a programmed processing rule in a computer;
- It can be understood on analogy with a hardwired processing rule in a computer;
- It can be understood on analogy with a learned processing pattern in a "trained-up" connectionist framework.

In the first two cases, procedural knowledge is explicitly represented in the system, whereas in the remaining two cases it is not, and rather operates tacitly or implicitly.

According to Greco, some hinges correspond to the third way in which procedural knowledge can be manifested; that is, they are items of procedural knowledge that are hardwired into human cognition. This would be the case, for instance, with hinges such as "My hands don't disappear when I am not paying attention to them" (OC 153); "There are physical objects" (OC 35) (meaning objects that are in space and are independent of perception). Even "Every human being has parents" (OC 211) and "Cats don't grow on trees" (OC 282) manifest "essentialist and natural kind heuristics that frame much of human reasoning". That is, "we are essentialist about

animal and plant categories, and are thereby committed to the proposition that *cats don't grow on trees*" (Greco 2021, p. 119). Finally, also "What has always happened will happen again" (OC 135) is hardwired into our psychology, according to Greco.

It can't but be noted that such a psychologistic and essentialist account is deeply at odds with Wittgenstein's overall philosophical attitude in the *Philosophical Investigations* and in *On Certainty*. His discussion of family resemblances (PI I, 65–77), for instance, is meant in large part as a corrective to essentialism; and his distinction between reasons and causes, explanations, and conceptual investigations, is meant to have philosophy shy away from psychologistic explanations. Be that as it may, even so called "naturalist" accounts of *On Certainty*, championed by Strawson (1985), emphasize the important difference between Wittgenstein's (alleged) naturalism and Hume's, for instance. Whereas Hume's naturalism is of "first nature", as it appeals to the hardwired workings of the human mind to account for our belief in the existence of physical objects, Wittgenstein's naturalism would be of "second nature". That is, it would not appeal to such psychological mechanisms, but rather to the process of acculturation within the human community. Hinges would not be hardwired into human psychology, but rather acquired from the community and internalized to become second nature to us, as a background – especially in the case of hinges+ – against which we produce reasons for or against ordinary beliefs and determine which ones are true or false.²¹

Rightly, however, Greco points out that some other hinges are items of procedural knowledge that result from "shared cultural inheritance" (Greco 2021, p. 120), and are therefore more similar to the fourth above-mentioned way in which procedural knowledge may be operative. Examples falling into this category, according to him, would be "I have never been far from the earth's surface", or "Motorcars don't grow out of the earth" (OC 279).

In passing, let me remark that these examples are infelicitous. The former does not seem to be acquired from the community but rather based on one's personal experiences and memories. The latter, in contrast, is not something we are typically told by other members of our community. Rather, we are told other things, such that artifacts are not biologically generated but constructed, from which we can draw out as a consequence that motorcars don't grow out of the earth. Yet, there are other examples of hinges that would fit Greco's "shared cultural inheritance" requirement. For instance, at the time Wittgenstein was alive, "No one has ever been on the Moon", or back then and now, "The Earth isn't flat" or "The Sun isn't a hole in the vault of heaven", or "Water boils at 100 °C". And, more generally, it is part of Wittgenstein's proposal that many hinges are either straightforwardly acquired from the community, like in the above-mentioned cases, or presupposed by other things we get from the community, like "The Earth has existed for a very long time" and other hinges+ (see § 2). Yet, it is difficult to maintain that hinges that are in the first category are tacitly operative in one's cognitive system. As we saw, this may be the case with "I have hands", but it is totally mysterious how hinges like "Water boils at 100 °C" could be tacitly opera-

²¹ Personally, I think Greco is right about the fact that "There are physical objects" is hardwired, but not about the hinges mentioned in OC 153, 211, 282. With "What has always happened will happen again", it could be either way.

tive when we perform an action, let alone engage in reasoning, where at most such a hinge would figure as an implicit premise, which a subject should be able to make explicit, upon request.

Another way to get at this problem is to consider that, according to Greco, the advantages of thinking of hinges as items of implicit or tacit procedural knowledge are:

- 1) That they can be actionable items of knowledge without thereby having to be explicitly represented, verbally or even in thought;
- 2) That they do not derive from reasoning and investigation;
- 3) That they are held in common without having to be taught;
- 4) That they are not reasons-responsive; and therefore
- 5) That they are not apt as contents of belief proper.

However, as we noted in § 2, for several examples of hinges, including those that Greco considers items of procedural knowledge, there are perfectly respectable explanations of how we may have acquired them, in ways that contravene to (2) and (3). Yet, as soon as we admit that at least some hinges are acquired, particularly, even if not exclusively, through testimony, this makes them contravene (1) too. That is, if we are taught them or get them from textbooks and other educational devices, then they clearly need to be said.

Now, it is true that part of our upbringing consists in *internalizing* them, so that these hinges become “second nature” to us. Yet, it remains that, at least at first, many hinges are acquired and are explicitly represented in the system. Thus, there is very little motivation for following Greco in holding that, at least when known, they would be instances of tacit or implicit procedural knowledge.

Now, only hinges+comport with (4) and (5), regardless of whether they would all satisfy (1). But in that case, it is difficult to see how they could be items of knowledge – procedural or otherwise – since they would be neither belief-apt nor reasons-responsive. To be told that “perhaps knowledge is wider than belief”, and that “perhaps other kinds of commitment can also be vehicles of knowledge” (Greco 2021, p. 122) is not very illuminating, and is certainly at odds with the aspirations of theoretical unity Greco insists upon. As a suggestion, which obviously I cannot develop here, it is more promising to hold that even if they aren’t items of knowledge, hinges+ may be so internalized as to be tacitly operative in our actions, inquiries, and decision-making procedures.

Yet, such a suggestion is not available to Greco, who, moved by compliance with the ideal of theoretical unity, in *The Transmission of Knowledge* insists on hinges being items of procedural knowledge, which should be accounted for in virtue-theoretic terms. As a virtue-theorist, Greco thinks that a necessary condition for knowledge is that it be the result of competent agency. Yet, competent agency is realized differently, depending on whether we are considering generated knowledge, transmit-

ted knowledge or common (procedural) knowledge.²² In particular, in the last case, Greco writes (2021, p. 124):

S has hinge knowledge that p only if a commitment that p is constitutive of S's competent cognitive agency.

Thus, Greco's overarching aim is to provide an anti-reductionist, yet unified account of all these various kinds of knowledge. Central to it, is the claim that all items in the knowledge economy, in particular hinges as contents of common knowledge, are indeed *known*, and that their knowledge derives from competent cognitive agency.

7 Conclusions

The foregoing should have made abundantly clear that, insofar as hinges are known, there is no reason to see them as instances of common knowledge. That is, of knowledge that is freely available in the informational system, such that one neither has to find out about it by oneself or learn it from others. Rather, they are either easily known through experience, memory, and inference, or explicitly learnt from other members of the community. Thus, they circulate in the system as instances of generated or transmitted knowledge. Yet, Greco is right to say that they circulate with no checks on their epistemic credentials. Furthermore, if they get internalized to the point of becoming second nature to us, they may become items of procedural knowledge, but they need not do so. That is, whereas with "I have hands" it is easy to see how it could have become an item of procedural knowledge – that is, something which tacitly works in the background to feed actions, and practical inferences –, with "Water boils at 100 °C", or "The Earth isn't flat", it is difficult to see in what sense such hinges could tacitly operate in our cognitive systems.

Conversely, if we are considering hinges+, they may be derived from inference but aren't epistemically supported by it; nor are they known through experience or testimony, even if we can derive them through reasoning or maybe even get them from testimony. Rather, they are the ungrounded presuppositions that make it possible for evidence to count in favor or against specific empirical claims, such that the latter may be justified, known, or rationally doubted. Not being known, hinges+ cannot be considered instances of common or procedural knowledge. Yet, it is true that they freely and tacitly circulate in the knowledge economy – not as items of knowledge, though, but as its groundless presuppositions.

Declarations

Conflict of interest There is no conflict of interest.

²² See Greco (2021, pp. 123–124) for the details of his virtue-theoretic account of generated and transmitted knowledge.

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