THE CLARITY OF UNDERSTANDING

by

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Abstract

A platitude about understanding is that it involves grasping. But what is grasping? In this thesis, I develop a novel account of grasping that is rooted in phenomenal consciousness. According to this account, grasping is a matter of having a distinct kind of conscious experience: clear perception. Clear perception has a distinct cognitive phenomenology that characterizes it. Call this the *clarity account of grasping*. I go on to argue that the dominant view of grasping in the literature, the ability account of grasping, is false. Using the new clarity account, I argue that grasping is not only distinct from the cognitive abilities associated with understanding, but also explanatory prior to them. Finally, I argue that the clarity account implies that understanding cannot be transmitted through testimony, because clear perception cannot be acquired on the basis of testimony. As such, clear perception plays key cognitive and epistemic roles in understanding and coming to understand.

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Understanding a philosophical topic is a significant cognitive achievement. Significant cognitive achievements are typically thought to resist division of epistemic labour and credit. The journey to writing this thesis tells you that this thought is completely wrong. Whatever understanding I have of 'understanding' could not have been without the insights and support of the following people.

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Preface

The Ideal of Understanding

Understanding lies at the centre of our intellectual lives. Not only do we strive to merely know things, but we strive to have deep and systematic familiarity with them, to see directly into things. In fact, most of the cognitive endeavours central to our lives can be understood as striving to achieve this epistemic ideal. For instance, we strive to have deep and systematic familiarity with the natural world, thus we strive to achieve scientific understanding. We strive to have deep and systematic familiarity with the moral realm, thus we strive to achieve moral understanding. We strive to have deep and systematic familiarity with beauty, thus we strive to achieve aesthetic understanding. We strive to have deep and systematic familiarity with the conceptual realm, thus we strive to achieve philosophical understanding. And finally, we strive to achieve this epistemic ideal in a most contentious realm, understanding ourselves and others. In the kingdom of epistemic ends, understanding reigns supreme.

While understanding takes central place in our cognitive lives and pursuit of inquiry, little is understood about the nature of this epistemic achievement. Epistemologists have, for a considerable amount of time, focused on the nature of propositional knowledge. However, in recent years, there has been a shift from focusing on knowledge to focusing on understanding instead. One of the main motivations for this turn is the widespread recognition of the value of understanding and the role it plays in setting the aims of inquiry.[1] Some philosophers even claim that understanding has been the epistemic ideal sought after by ancient and modern philosophers alike.[2] The problem is that

[1] (Zagzebski 2001; 2008; Kvanvig 2003; Pritchard 2009)
[2] (Pasnau 2013; Pasnau 2017)

understanding is so comprehensive and varied that it resists a condensed and unified treatment, which leaves us with little understanding of 'understanding'.

Luckily, there is one staple feature that is characteristically involved in understanding. When we understand something, we *grasp* it in such a way that it makes sense to us. Most accounts of understanding, explicitly or inexplicitly, attempt to explain (or explain away) the grasping involved in understanding. Some emphasize grasping as a kind of intellectual ability to manipulate our representations of the world, give explanations of its phenomena, and make various inferences about it. Some describe grasping as the fundamental mind and world relation through which we are intimately acquainted with the world. Though the analysis of grasping in terms of abilities has enjoyed considerable dominance in the recent literature on understanding, I reckon that grasping is a kind of conscious acquaintance. Grasping is a basic mind/world relation in virtue of which we come to an intimate acquaintance with the world. But what in all possible worlds does this mean?

My suggestion is simple, yet exceedingly hard to defend. What grasping really is, I am going to suggest, is a kind of intellectual perception in which you see things clearly. More exactly, grasping is clear perception or *clarity*. As we will see, clear perception is characterized by its distinct phenomenological character, i.e., what it is like to have a clear perception. Hence, grasping is a more exacting kind of conscious experience that we have with respect to what we understand.

This line of thinking about grasping has some important historical precedent. The Stoics used the notion of *Katalepsis* to denote a certain clear apprehension of a state of affairs. Later in the 17th century, we encounter Descartes's appropriation of this idea encapsulated in his notion of clear and distinct perception, a secure grasp (*cognitio*) on the world. We also find a similar line of thinking

about grasping in the history of Islamic philosophy. Al-Ghazali, for instance, maintains that grasping is a kind of intellectual seeing (Mūshāhada / مشاهدة), and he identifies this seeing with the notion of Ḏawq (ذوق) which literally translates into 'taste'. According to Al-Ghazali, there is something that it is like to 'taste' the truth which is essential to grasping it. The common denominator among these various views is the identification of grasping with a kind of phenomenal state.

The main aim of this thesis is to extend this line of thinking by defending a phenomenological account of grasping as well as the cognitive and epistemic roles of phenomenal consciousness in understanding and coming to understand. This is of course an enormous task given the variety of topics one can address in relation to understanding. To make the task more manageable, we will narrow our focus onto three topics. We will focus on the nature of grasping itself, its relation to the cognitive abilities associated with understanding, and its implications for the acquisition of understanding via testimony.

In chapter 1, I elaborate and defend the *clarity account of grasping*. The clarity account says that grasping is kind of conscious cognition, a phenomenal state, which not merely represents, but *presents* the world as being a certain way. In particular, grasping is a matter of having a clear perception. In doing so, the clarity account accommodates and explains core features of grasping.

Furthermore, grasping and understanding are associated with a suite of cognitive abilities. In chapter 2, I argue that these abilities are neither necessary nor sufficient for grasping. I suggest that the relation is somewhat the reverse. Grasping is explanatorily prior to the abilities associated with grasping and understanding. Cognitively, because clear perception underwrites and structures the range of cognitive abilities that constitute cognitive control, grasping explains why agents who understand have

these abilities. Epistemically, because the exercise of cognitive control by agents who understand is guided by clear perception, grasping explains why the exercise of these abilities is intelligent.

Lastly, understanding often proliferates in social settings. But can understanding be acquired on the basis of testimony? In chapter 3, I argue that given the clarity account of grasping, grasping cannot be acquired on the basis of testimony. This is because clear perception is an epistemically basic mental state, and epistemically basic mental states cannot be acquired through testimony. Consequently, an essential component of understanding cannot be transmitted via testimony.

By advancing these arguments I hope to draw attention to the implications the clarity account has within the theory of understanding. The clarity account gives a positive cognitive and epistemic role to the phenomenology involved in understanding. Many philosophers contend that the 'mental feeling' that accompanies understanding is neither sufficient nor necessary for this epistemic state.[3] If my arguments here are plausible, not only do we see how phenomenal clarity is necessary for understanding, but that it also plays key cognitive and epistemic roles in understanding and coming to understand.

At the base then, to understand is to possess clarity. Clarity puts us in a position to have deep familiarity and intimate acquaintance with the world. Hence *The Clarity of Understanding*.

Without further ado, let's go get it!

[3] See, for example, (Regt 2004); Grimm (2010); Hills (2009); Lipton (2009); Trout (2002).

Chapter 1

The Clarity Account of Grasping

A platitude about understanding is that it involves grasping. Thus, a scientist understands a natural law only if she grasps it. The environmentalist understands how climate change depends on carbon emissions only if she grasps this dependency relation. A moral agent understands why lying is wrong only if she grasps the reason why and so on.

Grasping is the cognitive and epistemic backbone of understanding. On this picture, not only is grasping necessary for understanding, but it also plays a fundamental explanatory role in understanding and coming to understand.

What then is the mental state we are in pursuit of? Grasping is sometimes taken to be the fundamental mind/world relation through which we are intimately acquainted with the world (Strevens 2013). Others associate grasping with a kind of skill one has over a domain or conceptual mastery (Zagzebski 2008; Hills 2009; 2016). Still, others associate it with knowledge of essences or a particular kind of explanation. Whatever view of grasping one subscribes to, it is clear that the mental state we are after puts us in a position to stand in a close cognitive relation with the world, and this relation is often manifested in our control over that portion of the world.[4]

We must first distinguish between different parts of understanding. In particular, we should distinguish between the psychological component of understanding, its objects, the normative relation

[4] (Strevens, Manuscript) provides a good overview of different accounts of grasping.

that holds between its psychology and its objects, and lastly the effects of understanding.[5] When we talk about grasping, we are directing our focus on the psychological component of understanding. Grasping is the cognitive relation in which we stand to the world when we understand. Therefore, it is paramount to an adequate account of grasping that it distinguishes grasping from its objects and its effects. This sharpens the individuation conditions that jointly constitute the mental state in question. After all, if grasping is defined through its objects, we risk confusing grasping with other mental states that relate to the same object. For example, if grasping is identified as possessing a representation of some explanation, then we risk confusing grasping an explanation with merely thinking about an explanation. Similarly, if grasping is defined through its effects, we end up with a poor explanatory story of the relation between grasping and, for instance, the abilities it confers. For example, if grasping is identified with the ability to manipulate representations, we risk allowing cases where this ability is present, but grasping is absent. Therefore, this chapter focuses on the nature of grasping independent of its objects and its effects.

Our main task in this chapter is to give a unified account of the grasping relation involved in understanding. In order to do so, we must proceed in two steps. Our first task is to lay out the characteristic features of grasping. In this first step, the aim is not to define or analyse grasping. Instead, the aim will be to provide a rough, theory-neutral characterization of the core features of grasping. These are, in other words, desiderata for any theory of grasp. Let us call this description of grasp the grasping profile, or the *G-profile*.[6]

[5] This distinction is due to Stephen Grimm (2016). 'The effects of understanding' is my addition.
[6] This idea is borrowed from Bengson's (2017) Understanding-profile (U-profile).

Once we have outlined the G-profile, our next step will be to provide an account of grasping that accommodates and explains the G-profile. To that end, I will propose that the mental state that satisfies the G-profile is the mental state of clear perception. This is the *Clarity Account of Grasping*. Let us now turn to the first step towards explaining grasp.

1.1. Desiderata for Grasp: The G-profile

To locate our target mental state, let us reflect on examples in which one subjects grasps something while another subject does not. First, consider:

Physics Law

In the lecture hall, an expert physicist is teaching the first law of thermodynamics. The physicist has a good grasp on the law. He directly sees how it's the case. A student attending the lecture comes to know the law on the basis of his teacher's testimony. However, while the student knows the law, he doesn't quite directly see it yet.

Perhaps the most commonly recognized feature of grasping is that one when grasps something one directly sees things for oneself.[7] In *physics law*, the physicist grasps the law and hence he sees it directly. On the other hand, because the student fails to see it directly, he does not grasp it. One way to describe this feature is that when one sees things directly, one knows what one is thinking about (Strevens, ms). In other words, the idea here is that when one grasps, one has a measure of insight into the object.

[7] For variations of this idea, see, e.g., Hills (2009); Pritchard (2016; 2014); Grimm (2014); Sosa (2019); Bourget (2017)

The example also helps us distinguish grasp from other representational states such as mere assent or acceptance (or various doxastic attitudes). In this case, although the student accepts the law as true and thereby has a representation of the law and might even be able to successfully employ this representation in answering questions on his exams, nonetheless, insofar as he does not see it directly, he does not grasp the law. Thus,

(1) When S grasps φ, S sees φ directly.

The second feature of associated with grasping is a kind of cognitive grip or hold. The analogy often employed to highlight this feature is that cognitive grasp is very much like grasping objects with one's hands. For example, when I grasp my squash racket, I feel and have a grip on its contours, weight, racket-head speed and so on. Similarly, in the cognitive domain, when one grasps, one has a similar grip. Consider:

Chess Game

> A chess grandmaster and a novice watch a chess game. White is pushing black into a tight mid-game position that is quite difficult to escape. The grandmaster grasps how white is clearly winning; she has a kind of grip over this tactical position. The novice can also see that white has an advantage, but he does not quite have a grip on the tactical position and how it means that white is clearly winning.

The grandmaster has a hold on the game's tactical positioning and how is it that white is clearly winning. The novice, in contrast, lacks this hold. Now, it is not quite accurate to say that the grandmaster's hold consists in her ability to explain why white is clearly winning. After all, the novice

can also explain this without having a hold on the game. For instance, the novice could have memorized mid-game variations and simply recognized this variation as a good position for white.[8] We can recognize an analogous case in the squash racket example. My grip on the squash racket is not the same as my ability to swing with it. Another example illustrates this point:

Logic Student

In her symbolic logic course, a student comes to learn DeMorgan's Law, that the negation of a disjunction is logically equivalent to the negation of both disjuncts in a conjunction: ¬(p v q) ≡ (¬p ^ ¬q). The student implements this knowledge on her tests and gets her derivations correct. But at the end of the term, the student realizes that she does not really get the law; she doesn't see how its two parts are actually equivalent.

Although the student is reliably disposed to manifest her recognitional and inferential abilities with respect to the logic law, insofar as she doesn't grasp the law, she lacks the relevant grip or hold that is characteristic of grasping. Hence, this example also illustrates that while grasp instantiates a feature of cognitive hold or grip, it is not quite accurate to describe this in terms of abilities. To summarize the second feature of grasp:

(2) When S grasps φ, S has a grip on φ.

The third feature of grasping is that when one grasps something one makes sense of that thing. As John Bengson puts it, "to genuinely understand something is to grasp it—whatever is understood—

[8] For an interesting discussion for the implications of chess within theories of understanding see (Wilkenfeld and Hellmann 2014).

in such a way that it makes sense to you" (Bengson 2017, 19). Since the notion of making sense is not as straightforward, let us try to flesh out an initial characterization of the sense-making feature characteristic of grasping. To do so, let us consider another example:

Descartes's Argument

A first-year philosophy student is studying Descartes's ontological argument for the first time. According to Descartes, God exists because God is a supremely perfect being. The student knows that Descartes's argument says thus-and-so, but it doesn't quite make sense to her how (according to Descartes) God being a perfect being is supposed to entail its existence. In contrast, her teacher, an expert on Cartesian philosophy, has an excellent grasp on the argument, and hence it makes sense to her.

In what way did the argument not make sense to the student? An intuitive way to gloss this is that the argument was obscure or opaque to her. It wasn't quite clear to her how according to Descartes the conclusion is supposed to follow from the premises. Contrast this with the teacher who grasped the argument such that it made sense to her. In contrast with the student, the teacher could clearly see how according to Descartes's argument, God's being a perfect being entails that God exists. This example suggests that making sense is the opposite of obscurity and opaqueness. Whenever I cannot make sense of φ, φ remains obscure and opaque.

It is important to distinguish the opposite of making sense from its mere absence. Things that one is completely ignorant of are not obscure to one. For instance, if someone never heard of the French revolution, then it is not obscure to her why it occurred. The reason for this is because her

mental state is not directed at anything, and as such nothing is obscure to her. The relation between obscurity and making sense is similar to desire and aversion. Aversion is not the mere lack of desire, but the opposite of it. Though I don't desire milk chocolate, I am not averse to it. While in contrast, I am averse to white chocolate, and hence in a state that is the opposite of desiring it.[9] This qualification is important because an adequate account of grasping will have to tell us how to go from the opposite of making sense to making sense, that is from obscurity to clarity. To summarize the third feature of grasping:

(3) When S grasps φ, S makes sense of φ, such that φ is not obscure or opaque to S.

Features 1-3 highlight grasping's subjective dimension. But grasp also has an objective dimension. More specifically, though grasping has a subjective feeling of comprehension, there is a sense in which when one grasps one is genuinely related to a portion of reality, facts, or states of affairs. For example, you cannot grasp that England won the 2018 World Cup or that 3 is smaller than 2, simply because these are not accurate. Similarly, in our examples, the physicist doesn't grasp the first law of thermodynamics if his grasp is incorrect; the logic student doesn't grasp the DeMorgan's Law if she thinks that its constituents are inequivalent. Thus, grasp is not merely subjective, but:

(4) Grasping also has an objective dimension.

Lastly, in all our examples, grasping is not strictly an all or nothing matter. Rather, grasping comes in degrees. In particular, grasping is gradable along its various features. Thus, the physicist sees the law better than the student, the grandmaster's grip on the game is superior to the novice's, and

[9] The importance of states opposite to understanding and grasping as guide to for an account of understanding has been suggested by Samuel Dishaw in work in progress. I am indebted to insightful discussions with him on this topic.

Descartes's argument makes much more sense to the Cartesian expert than it does to the student. As such,

(5) Grasping is gradable.

So far we only have a rough characterization of the salient features of the grasping involved in understanding. To condense, the G-profile tells us that:

(1) When S grasps φ, S sees φ directly.

(2) When S grasps φ, S has a grip on φ.

(3) When S grasps φ, S makes sense of φ, such that φ is not obscure or opaque to S.

(4) Grasping is objective.

(5) Grasping is gradable.

What we now need is an account of grasping that satisfies and explains the G-profile. More precisely, our question is the following:

What is the mental state in virtue of which one grasps φ?

The answer, I propose, is *clarity*: You grasp φ only when, and because, you perceive φ clearly.

1.2. Clarity and Clear Perception

So what is clarity? It will be instructive to look at one of the richest accounts of clarity and clear perception in the history of philosophy, namely Descartes's. Here I am entirely indebted to the work Elliot Samuel Paul has recently done to clarify Cartesian clarity (Paul 2020; Paul *forthcoming*, chapters

3, 4). For Descartes, as Paul explains, you grasp something (you have *cognitio* of it) by perceiving it clearly. In the *Principles*, Descartes explicates what a clear perception is:

> I call a perception 'clear' when it is **present** and accessible [Fr. manifest] to the attentive mind—just as we say that we see something clearly when it is **present** to the eye's gaze and stimulates it with a sufficient degree of strength and accessibility. (*Pr.* i.45).[10]

According to Descartes, a perception is clear when its subject-matter is present to the mind. In other words, clear perception is a presentive cognition. Thus, clear perceptions have a distinct phenomenological character: They are presentational.[11] On this proposal, grasping is a matter of clearly perceiving, where that is understood as having a presentational cognition.[12]

Clear perception is individuated by its presentational phenomenology. The phenomenal character, or phenomenality, of a mental state is the subjectively experienced quality of what it is like to have that mental state. Hence, in order to understand the nature of clear perception, we need to get a handle on the phenomenal quality of presentationality. Since phenomenal qualities are the experienced qualities of a mental state, we get clearer on the concept of clear perception by attending to examples of presentational cognitions.

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[10] Descartes (1985, 207).

[11] My understanding of presentational phenomenology is largely indebted to Bengson (2015b) and Chudnoff (2013; 2012), whom Paul (2020) also acknowledges in his work.

[12] The view that grasping is a kind of presentive cognition is not unique to Descartes. Chudnoff (2013, 1-6) provides a neat overview of historical and more recent positions that treat grasping in a similar way. While Chudnoff's main target is 'intuition', there are close connections between intuition and grasping. For instance, Chudnoff takes intuition to be a kind of intellectual perception in the same way that I take grasping to be an intellectual perception. I also think that intuition is a species of grasping (mostly directed towards conceptual and a priori propositions). Moreover, I tend to think that most of the historical figures that Chudnoff is drawing from are trying to elucidate a particular form of grasping.

To start with, mental states that instantiate presentationality have a certain 'phenomenal force' (Pryor 2000, 547, n.37) or 'forcefulness' (Huemer 2001, 77) to them. Paul (2020, 10) gives the following example. Look at the screen or paper that you are reading these words on. Now close your eyes and conjure up the same scene in your mind. You will find that there is a notable qualitative difference with respect to your visual perception and your imagining. In particular, you will find that your visual perception presents its content as obtaining in a certain way, the content forces itself upon your mind; it should be quite vivid. In contrast, your imagination fails to present its content in a similar way.

One way to understand presentational phenomenology is to contrast presentational states (by which I mean mental states that instantiate, and are individuated by, presentational phenomenology) with other contentful states. Bengson (2015b) makes an illuminating distinction between merely contentful, merely representational, and presentational mental states. Hoping that p, for example, is a merely contentful state. I can hope that Egypt wins the 2022 World Cup, but my hoping doesn't represent the world as being a certain way. Representational states are contentful but also "represent the world as being a certain way, namely the way the world would be if their content were true" (Bengson 2015b, 716). For example, I believe that Egypt Won the 2010 African Cup. My belief represents the world as being a certain way; in particular, the way the world is if Egypt in fact won the 2010 African Cup (which they did in fact).

Presentational states are different, however. In addition to representing the world as being a certain way, presentational states *present* the world as being that way. I can believe that p without p striking me as being the way my belief represents it to be. In contrast, so long as I am attending to φ,

when φ is presented to me it strikes me as being in the way my presentational state presents it to be. When p is presented to one, we might describe, p impresses itself unto one's mind. For example, though I believe that the number 1729 has the property of being the smallest number expressible as the sum of two positive cubes in two different ways, it is not presented to me that this is so; it doesn't strike me as true nor does it impress itself upon my mind.[13] Similarly, although I believe that mass and energy are equivalent and differ only by a constant ($E=mc^2$), it is not presented to me that this is the case. In contrast, while I believe that volume is inversely proportional to pressure, this also presented to me such that it strikes me as being the case. And while I believe that personal identity supervenes on psychological continuity, I am also under the impression that this is the case. Hence, when one is presented with something, as opposed to merely representing something, things strike one as being the case and one's mind is under the impression that this is so.[14]

To highlight this further: when one is presented with φ, one is acquainted with φ in one's experience. Presentational states reveal how things are. Berghofer (2020) describes this as the object being given in experience.[15] As Descartes highlights in the quoted passage from the *Principles*, clear perception renders its subject-matter manifest and accessible to the mind. For example, suppose you know through testimony that it is raining in Alexandria, Egypt. Though you know that it is raining in Alexandria, you are not acquainted, and hence not presented, with this state of affairs. The reason is because you are not given this in your experience, your experience does not reveal or render manifest

[13] For an interesting discussion of this specific example see Bengson (2015b, 717).
[14] Some describe this quality as a kind of 'felt veridicality' or as seeming to be true (Tolhurst 1998, 298) I must note that I do not favour describing presentational phenomenology in terms of 'seeming to be true'. Instead I prefer describing presentational phenomenology as presenting the object in experience as obtaining, or, as Berghofer (2020) suggests, as being given in experience. As I indicate in footnote 17, this distinguishes mere seemings from presentations.
[15] What he calls 'phenomenology of givenness' is just another way to describe presentational phenomenology.

that it is raining in Alexandria. What you are given, instead, is an item of testimonial information. The same idea applies in the intellectual domain. On the basis of reliable testimony, I know that the number 1729 has the property of being the smallest number expressible as the sum of two positive cubes in two different ways, but I am not acquainted with this fact in such a way that this fact it is manifest to me in experience. Hence, presentational states acquaint one with φ in such a way that they reveal, give, or render manifest φ in experience.[16] [17]

Clear perception, when it presents its subject-matter in the way described, puts one in a position to have a hold on its content. In a letter to Jean De Silhon from 1648, Descartes writes:

> You will surely admit that you are less certain of the presence of the objects you see than of the truth of the proposition 'I am thinking, therefore I exist.' Now this apprehension is not the work of your reasoning or information passed on to you by teachers; it is something that your mind ***sees, feels and handles*** … (translation altered by Paul 2020, 18-19; my emphasis)

The kind of apprehension Descartes is stressing here is knowledge acquired through clear perception. According to him, when you clearly perceive something, your mind 'sees, feels and handles' the object of your perception. In other words, when you clearly perceive φ, you cognitively seize upon φ. Once again, this is best illustrated by an example. Recall in *logic student* that upon first attending to the law,

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[16] As Strevens (ms) highlights, the idea behind this description echoes distinctions such as William James distinction between 'acquaintance with' and mere 'knowledge about' and Russell's (1910) distinction between 'knowledge by acquaintance' and 'knowledge by description'.

[17] Clear perception is a more exacting kind acquaintance, however. I wish to make two brief clarifications here. First, although clear perception is a presentational state, acquaintance doesn't capture everything about clear perception. The reason, as we will see, is that clear perception does not merely acquaint us with its subject-matter, it also puts us in a position to make sense of it. Second, because clear perception puts us in a position to make sense of or apprehend φ, it is different from it seeming to us that φ. However, the notion of acquaintance does not adequately distinguish between having a clear perception and a mere seeming.

it is not presented to the student that these two propositions are equivalent, and as such she doesn't really have a handle on the relation between them. But once the student perceives the law clearly, i.e., once the law is presented to her, not only does she see that it obtains, but she cognitively seizes upon the proposition in such a way that she has a handle on it. Thus, when one clearly perceives φ, one cognitively seizes upon φ.

In relation to this feature of clear perception, we must highlight an important enabling condition for clarity. In particular, clear perception requires attention. In the *Principles* passage quoted above, Descartes highlights that a clear perception presents its object "to the attentive mind". What attention does is that it concentrates consciousness unto a particular object. For example, when I attend to my wristwatch to check the time, I bring into sharp focus its analogues. Similarly, when the student attends to the proposition that expresses DeMorgan's Law, she brings that proposition into sharp focus. By bringing the object of perception into sharp focus, attention enables one to have the cognitive hold characteristic of clear perception. That is, attention enables one to cognitively seize upon the object.

Clarity is the opposite of obscurity and opaqueness. An opaque perception is muddled and confused. As such, obscure perception of φ doesn't render φ intelligible or comprehensible. Quite the opposite: it leaves one puzzled about φ. In contrast, clear perception illuminates its object. As such, clear perception of φ renders φ intelligible and comprehensible. Again, this is because clear perception presents its objects in experience in such way that makes them transparent, evident or luminous. That is, to put metaphors aside, it presents them as being a certain way.

Clear perception is also a factive state. One cannot perceive φ clearly if φ is false or incorrect. In other words, if one clearly perceives φ, then φ is true or correct.[18] This is because clear perception is a genuine acquaintance with its objects. This may sound odd because our description of clear perception mostly focused on its subjective dimension, what it's like to have a clear perception from the subject's point of view. But for example, one cannot clearly perceive that 1+1=3, because there is no such thing to be acquainted with. Similarly, one cannot clearly perceive a scientific law (even if it is not true description of the world) if one represents it incorrectly. To that extent, clear perception involves success terms.

Lastly, clarity comes in degrees. The more φ is evident, manifest, or transparent, the more clearly you perceive φ. The degree of clarity is proportional to how strongly things are presented in experience. For example, the law of thermodynamics is clearer to the expert chemist than the novice student. That is, the clarity of the chemist's perception is better than that of the student. This is because the law is more strongly presented to the chemist, it is more evident and manifest to her. Let us summarize what clear perception consists in. S possesses a clear perception of φ when:

a) Φ is presented to S

b) S cognitively seizes upon φ

[18] I am aware that this raised a host of problems, like for instance grasping false propositions or false scientific theories. However, by remaining neutral with respect to the object of clear perception, I can still say that one can grasp propositions, facts, models, or whatever, without undermining the claim that you need a correct representation of these objects in order to perceive them clearly. This might eventually require that I dispense of my description of clear perception as factive states. However, clear perception remains a success term, where you need to correctly represent the object of your perception. I will admit that I am still thinking about how to best capture this feature of clear perception.

c) S is in a state opposite to obscurity and opaqueness. (where (b) and (c) hold because of (a))

d) S represents φ correctly (or φ is correct or true)

e) The perception is gradable along (a-d)

Now that we have in view what clarity and clear perception consist in, let us now turn to the second step of this chapter. In the next section, I will propose to define grasping in terms of clear perception.

1.3. The Clarity Account of Grasping

I have promised a theory of grasping that accommodates and explains the G-profile. In this section, I will argue that the mental state that satisfies and explains the G-profile is clear perception. Call this the *clarity account of grasping*. The clarity account of grasping makes the following core claim:

Grasping is Perceiving Clearly

S grasp of φ *consists in* possessing a clear perception of φ, and S grasps φ *in virtue of* perceiving φ clearly.

Thus, to grasp φ is to stand in a certain cognitive relation to φ: Clear perception.[19]

[19] To my knowledge, Bourget's (2017) is the only attempt in the recent literature on understanding that gives due role to the phenomenology of grasping. He rejects the view that grasping is a kind of inferential ability (alà the ability account examined in the next chapter). Instead, on his view, grasping p is a matter of having a phenomenological experience with respect to p. To that extent, Bourget paves a way to think about grasping in phenomenological terms and I do think he is on the right track. However, Bourget's suggestion is limited in one important respect. In particular, Bourget does not specify the kind of conscious experience that makes for grasping. After all, not any kind of conscious experience that possesses cognitive phenomenology would amount to grasping (my hoping that p might involve a kind of conscious experience, but it certainly doesn't amount to grasping). In contrast with Bourget, the clarity account of grasping identifies a more exacting conscious experience that constitutes grasping, namely clear perception.

Let us put this claim to the explanatory test by considering our examples. In order to pass the test, the clarity account of grasping needs to adequately explain why some of the agents in our examples possessed grasp while the others lacked it. In doing so, the clarity account will also explain why agents who grasp instantiate the relevant feature of the G-profile.

In *physics law*, the expert physicist grasped the first law of thermodynamics and hence could see it directly. In contrast, the beginner student didn't see it directly and hence didn't grasp the law. The reason is because the expert physicists had a clear perception of the law, whereas the student lacked clarity. Note that this is true even if the student had an accurate representation of the law. However, he could have accepted the law without seeing it directly. Now, because clear perception is presentational, it puts us in a position to see things directly. Given this, we can see that the expert physicist sees the law directly because it is presented to her in experience in such a way that she sees it as being the case. In contrast, the student did not see the law directly because it wasn't presented to him in experience. It wasn't given to him in experience in such a way that it struck him as being the case.

In *chess game*, the grandmaster grasped the game position and hence had a cognitive grip on why white was in a stronger position. In contrast, the novice didn't have a similar grip and hence lacked a similar grasp. Clarity explains why. In particular, the reason the grandmaster had a cognitive grip on the game position is because she perceived it clearly. Because clear perception is presentational, when one perceives φ clearly one cognitively seizes upon φ. Given this, clear perception puts us in a position to have a cognitive grip on the object of our perception.

It might be argued that one can have cognitive grip without possessing clear perception. For instance, in *logic student*, the student might be able to mechanically substitute ¬(p v q) with (¬p ^ ¬q) without needing a thicker grasp on the law. In other words, the student can instantiate a core feature of grasp—cognitive grip—without possessing clear perception. If this is the case, then either clarity is not doing much explanatory work or is not necessary for grasping. This objection flags an important issue about the relationship between clear perception and the abilities associated with grasping and understanding. The nature of this relationship will occupy us in the next chapter. To briefly foreshadow, I will argue that even if agents can sometimes initiate something like cognitive grip, if their grip is not guided by clear perception then they don't possess understanding. But let us leave this for the next chapter.

In *Descartes's argument*, the teacher grasped how the argument works and hence it made sense to her. In contrast, the student didn't make sense of the argument and hence didn't grasp it. Clarity also explains this. Recall that when something doesn't make sense it is obscure and opaque. Clarity, as we have seen, is the opposite of obscurity and opaqueness. This is so because clear perception makes its object clear, transparent, manifest and so on. That is, it reveals the way it is. When something is obscure, it is not intelligible to one. Whereas when something is clear it intelligible and comprehensible. To the extent that clear perception, by illuminating its object, dissolves obscurity and opaqueness, clear perception puts us in position to make sense of things. In our example, because the teacher perceived the argument clearly it was transparent to her how (according to Descartes) God's perfection entails its existence. Descartes's argument was not similarly transparent to the student and

hence didn't make sense to her, and we can see why: it is not clear to the student. Clarity makes sense of things.

In all these cases, the subjects would not genuinely grasp φ if their grasp of φ is incorrect. For instance, one does not genuinely grasp the first law of thermodynamics if, e.g., one thinks that the change of internal energy of a system is *not equal* to the net heat transfer into the system minus the net work done by the system (which are supposed to be equal). Clarity explains this. Because clear perception is a factive state, one cannot grasp something that is incorrect. Therefore, clear perception is not merely a subjective state, it also possesses an objective dimension.

Finally, in our cases, grasping is not an all or nothing matter. Rather, grasping comes in degrees. For instance, the expert physicist's grasp of the first law of thermodynamics is superior to the student's; the grandmaster's grasp of the game is better than the novice's and so on. Because clarity is gradable, subjects can possess perceptions that are more or less clear. Since clear perception comes in degree, grasping also comes in degrees.

It is now apparent how clear perceptions play the role of grasping. Clear perception satisfies and explains the G-profile. To put it succinctly, because

(A) Clear perception is presentational → (1) Grasping involves directly seeing.

(B) Clear perception puts one in a position to cognitively seize upon φ → (2) Grasping involves cognitive grip on φ.

(C) Clear perception is the oppositive of obscurity and opaqueness → (3) Grasping involves making sense.

(D) Clear perception is a factive→ (4) Grasping is objective.

(E) Clear perception comes in degrees → (5) Grasping is gradable.

1.4. Clarity and Understanding

I have so far argued that grasping is clear intellectual perception. Understood as such, we can see that grasping is a phenomenal state. Now, since grasping is the cognitive and epistemic backbone of understanding, we must examine how the relation between clear perception and other properties of understanding. Over the next two chapters, we will examine the relationship between clear perceptions and the abilities associated with understanding, and whether, given this analysis of grasping, understanding can be acquired through testimony.

CHAPTER 2

CLARITY, ABILITIES, AND UNDERSTANDING

2.1. Introduction: Abilities and Understanding

Understanding and grasping are typically associated with a set of cognitive abilities that agents who understand possess and exercise. In fact, a main view in the literature identifies understanding with these abilities. Allison Hills, for instance, maintains that the following set of abilities are essential for understanding and grasping:

> (1) Following some explanation of why p given by someone else.
>
> (2) Explaining why p in your own words.
>
> (3) Drawing the conclusion that p (or probably that p) from the information that q.
>
> (4) Drawing the conclusion that p' (or probably p') from the information that q' (where p' and q' are similar to but not identical to p and q).
>
> (5) Given the information that p, give the right explanation, q.
>
> (6) Given the information that p', give the right explanation q'. (2016, 663)

In addition, Stephen Grimm (2014) argues that grasping is an ability to see how things depend on each other; that is, an ability to see how things stand in relation to each other in modal space. Daniel

Wilkenfeld (2013) also suggests a view of grasping as an ability to manipulate the target of understanding.[20]

The intricate details of each view are not of crucial importance to this chapter. Instead, the aim of this chapter is to assess the general structure of what we will call the ability account of grasping. To achieve this end, we can make use of a general characterization of the core claim of the ability account:

S grasps φ in virtue of bearing some cognitive ability with respect to φ

In the last chapter, I suggested that grasping is clear intellectual perception. The clarity account, which implies that grasping is a kind of conscious experience, is in tension with the ability account. Nonetheless, it is very plausible, and almost undeniable, that instances of understanding are accompanied by the possession or exercise of cognitive abilities.

So, we have a puzzle. If understanding involves both clear perception and abilities, and grasping is clear perception, then what is the status of the abilities associated with understanding? The conjunction of the clarity account of grasping and the core claim of the ability account suggests three interesting questions to explore in this chapter. In particular, given the clarity account of grasping,

(1) Are abilities sufficient for grasping?

(2) Are abilities necessary for grasping?

(3) Which of clear perception or abilities has explanatorily priority?

[20] Other view that construe understanding and grasping as related to some kind of ability include (Zagzebski 2008; Kvanvig 2003; Strevens Manuscript)

To foreshadow what will come, in sections 2 and 3 I will argue that abilities are neither sufficient nor necessary for grasping, which undermines the core claim of the abilities account. However, this conclusion only serves to intensify the puzzle I pointed out. For recall my assumption that instances of understanding are accompanied by cognitive abilities. But the puzzle is solved by answering the third question. In section 4, I will argue that clear perception is explanatorily prior to abilities. More specifically, I will argue that clear perception explains why agents who understand possess and are in a position to acquire and exercise the cognitive abilities associated with understanding. This turns on the cognitive role of clear perception in understanding. Furthermore, I will argue that clear perception explains a key epistemic feature of the abilities associated with understanding, namely that their exercise is intelligent. This turns on the epistemic role of clear perception in understanding. In the end, I will consider whether clear perception is a kind of ability that can be subsumed under the ability account of grasping.

Before moving on, one point of clarification is in order. Since the clarity account identifies grasping with an occurrent mental state and the ability view identifies it with a dispositional state, it might be suggested that, after all, these two accounts are tracking different mental states. But that is not the case, however. For on the clarity account, occurrent grasping has a dispositional counterpart. After all, I can still be said to grasp something even while asleep, i.e., even if I am not having an occurrent grasp of it. To that extent, it is important to stress that on the clarity account the dispositional state of grasping is explained in terms of a disposition to have an occurrent clear perception. Hence, while the central target of the clarity account is occurrent clarity, it nonetheless account for its dispositional counterpart. (This point will be discussed further in sect. 5).

2.2. Are Abilities Sufficient for Grasping?

To start with, let us consider whether abilities, as construed above, are sufficient for grasping. If abilities are sufficient for grasping, then we should expect that all instances where a subject has cognitive abilities with respect to φ, the subject grasps φ. To put this to the test, let us consider some examples. Consider:

> **DNA Translation**
>
> A biology student is studying DNA translation. The student successfully memorized a portion of an advanced genetics textbook on DNA translation. Her successful rote memorization of the processes and mechanisms of DNA replication disposes her to reliably succeed at explaining how DNA translation works, by pointing at the successive steps from base pairing to RNA translation to polypeptide chain synthesis. She also memorized how various DNA base modification correspond to certain mutations. Hence, she can reliably make various inferences regarding the process of DNA translation.

The student has various cognitive abilities with respect to the mechanisms involved in DNA translation. But does the student grasp the mechanisms of DNA translation? Intuitively, there is something missing. We do not typically expect agents who are successful at certain cognitive tasks because they are good at memorizing to have genuinely grasped whatever it is that they memorized. After all, the abilities highlighted are merely reliable behavioural and functional dispositions.

Can we explain this intuition? One explanation is that the student's abilities do not satisfy core features of the G-profile. In particular, having only memorized the mechanisms involved in DNA

translation, it does not follow that the student can directly see how these mechanisms work, that the student has a grip on them, or that DNA translation makes sense to her. The student can be reliably disposed to explain DNA translation and successfully answer various questions about it, but that is compatible with the student not directly seeing it, lacking a grip on it, or not making any sense of the process–that is, it could remain unintelligible and obscure to her. In other words, one can possess abilities with respect to φ without instantiating the G-profile, i.e., without grasping φ.

Moreover, given the clarity account of grasping, we can understand why the student fails to grasp despite possessing abilities. The student fails to grasp because, though she memorized the mechanisms of DNA translation, she lacks a certain kind of perception of her target: she lacks clear perception. More specifically, the mechanisms (or the representation thereof) are not presented to her in experience such that she sees them as obtaining. Because she lacks clear perception, DNA translation is not genuinely intelligible to her, she does not make sense of it. Hence, we can see why abilities alone are not sufficient for grasping: Grasping requires clear perception.

The case against the sufficiency claim is intensified when we consider two agents who display the same functional and behavioural profiles, i.e., abilities, with respect to φ, yet one possesses grasp while the other lacks it. Consider a variant of *chess game*:

Chess Bot

The top ranked chess grandmaster is playing the most developed chess bot to date. The grandmaster is so skilled she rarely commits mistakes and always puts herself in strong tactical positions. Similarly, the chess bot does not make mistakes or blunders. The bot can run all

possible piece movement and infer what the best move and tactical position is. As far as functional and performative appearance goes, the grandmaster and chess bot have the same functional and behavioural dispositions.

Do they both grasp chess?[21] Intuitively, though both agents are on par with respect to their abilities, only the grandmaster grasps chess. However, if abilities are sufficient for grasping, then both should grasp chess. There is something missing. One can claim that the chess bot does not grasp chess because it lacks representational capacities (or mental states). But even if chess bots had some kind of representational capacities, their abilities won't amount to grasping. After all, we have seen in *DNA translation* that the student (who possess representational capacities) is reliably disposed to succeed at answering various questions regarding the mechanisms of DNA translation while failing to grasp it. Hence, there is something still missing. Given the clarity account of grasping, we can understand the difference in *chess bot*. Even though the two agents have the same abilities, they differ in their possession of clear perception. The grandmaster possesses clear perception and thus grasps chess, while the bot lacks clear perception and thus fails to grasp chess.

In sum, by reflecting on examples I suggested that abilities are not sufficient for grasping. One can possesses a range of inferential and explanatory abilities (or related cognitive dispositions) with respect to φ but nonetheless fail to grasp φ.[22]

[21] The relevant target here might be a particular chess games or positions within games. But for simplicity's sake I will just talk about 'chess' as the target here.

[22] As we will see in chapter 3, these cognitive abilities are also shared by propositional knowledge. As such, appealing to abilities is insufficient to drive the wedge between understanding and grasping on the one hand, and propositional knowledge on the other, which is a problem for some non-reductive ability accounts of understanding and grasping.

Now, although abilities might not all by itself be sufficient for grasping, it is still an open question as to whether they are necessary for it. Let us now turn to examine this necessity claim and see whether it is true of grasping.

2.3. Are Abilities Necessary for Grasping?

If abilities are necessary for grasping, then the following conditional must hold:

> If S grasps φ, then S possesses cognitive abilities with respect to φ

Let us say very briefly why one might think this is true of grasping. There seems to be a tight relationship between grasping something and being able to manipulate it various ways. For instance, Allison Hills writes:

> When you grasp a relationship between two propositions, you have that relationship under your control. You can manipulate it. You have a set of abilities or know-how relevant to it, which you can exercise if you choose. (2016, 663)

For example, when the physicist grasps the first law of thermodynamics, she can manipulate its representation in various ways and explain it. When the philosopher grasps why justified true belief is not necessary for knowledge, she has the relationship between JTB and knowledge under her control such that she can answer various what-if-questions about knowledge and so on. Now, the necessity claim does not merely stipulate a necessity relation between grasping and abilities, but it is also an explanatory claim. More specifically, the necessity claim explains grasping in terms of abilities. In other words, according to the necessity claim, one possesses grasp in virtue of having these abilities.

The necessity claim, I want to argue, is explanatorily weak and demonstrably false. Two ideas support this claim. First, with respect to the explanatory claim, it is possible to have a shift from non-grasping to grasping just in virtue of clear perception and without appealing to abilities to explain this shift. Second, with respect to the reduction claim, it is sometimes possible to grasp with having abilities with respect to what is grasped.

Let us start with the first idea, that it is possible to have a shift from non-grasping to grasping just in virtue of clear perception and without appealing to abilities. Recall the following example:

> **Logic Student**
>
> In her symbolic logic course, a student comes to learn DeMorgan's Law, that the negation of a disjunction is logically equivalent to the negation of both disjuncts in a conjunction. The student implements this knowledge on her tests and gets her derivations correct. But at the end of the term, the student realizes that she does not really get the law; she doesn't see how its two parts are actually equivalent.

In this case the student does not grasp the logic law. In virtue of what does the student shift from not grasping the logic law to grasping it? The necessity claim implies that abilities are essential to explain the shift to grasping. However, we can see that this is not true. In particular, the student can shift to grasping the law just in virtue of clearly perceiving the law. For instance, the student can come to directly see how the two parts of the law are equivalent just in virtue of it being presented to her in experience that this is so. Similarly, her perception of the law might change from being obscure to being clear (i.e., it come to make sense) just in virtue of clearly perceiving the law. In other words,

the shift to grasping can occur only in virtue of a qualitative shift in one's conscious experience of a target. Hence, we can explain the shift without appealing to abilities.

In addition, the student can clearly perceive the law (i.e., grasp it) without having any abilities with respect to it. For instance, the student can have a clear perception of the law without being able to explain it, make any interesting inferences about it, draw conclusion concerning it, nor manipulate its representation. Grasping can occur just in virtue of the law being clear to her. Therefore, there is good reason to think that attributions of grasp do not presuppose attributions of abilities.

It is also not clear how abilities are necessary for, or directly bear upon, core features of grasping. For instance, it is not clear how abilities are necessary for directly seeing the target. I can be acquainted with many things without being able to manipulate them (or more specifically, their representations). Similarly, it is not clear how having abilities makes this thing less obscure to me in virtue of having these abilities.

Now, it is typically the case (though not always) that one comes to grasp after exercising some reasoning abilities. For example, the student will come to grasp DeMorgan's Law after doing a truth table and reasoning her way through it. However, that is not to say she grasps only if she has these abilities such that her abilities explain why she grasps. Rather, these reasoning abilities and their exercise enable, cause, or put her in a position to clearly perceive the law.

Despite these arguments, grasping typically goes hand in hand with abilities nonetheless, at least psychologically speaking. That is, whenever we grasp φ, we seem to have or manifest some abilities with respect to φ, which is the sort of relationship the necessity claim is trying to capture. But the

conditional implied by the necessity claim does not adequately capture the explanatory relation between grasping and abilities. I want to suggest that the explanatory relation does not go from abilities to grasping, but instead from grasping to abilities. In particular, given the clarity account of grasping, clear perception explains the abilities typically associated with understanding.

In the next section, I will argue that clear perception puts us in a position, by underwriting or structuring, the range of cognitive abilities that we acquire when we understand. Moreover, I will argue that clear perception explains key features of these cognitive abilities that render them epistemically special. As will be clear, grasping does not presuppose abilities, it is abilities that presuppose grasping.

2.4. Grasping is Explanatorily Prior to Abilities

A quick recap. I have claimed that abilities are neither necessary nor sufficient for grasping. Nonetheless, I maintained the initial assumption of this chapter that possessing some sort of cognitive abilities is characteristic of grasping and understanding. Now, since abilities are neither necessary nor sufficient for grasping, and hence they do not explain the possession of grasp, it is an open question as to what explains the abilities possessed by agents who understand. My answer: grasping explains the abilities associated with understanding. More specifically, in this section I will argue that clear perception puts us in a position, by underwriting or structuring, the range of cognitive abilities we acquire when we understand. Moreover, I will argue that clear perception explains key features of these cognitive abilities that render them epistemically special.

There a couple of steps towards defending this claim. The first step involves reflecting on the relationship between the acquisition of propositional knowledge and the abilities acquired upon

gaining such knowledge. When we propositionally learn that p, we acquire a range of cognitive abilities with respect to p, and our learning that p explains why we acquire these abilities. The relationship between grasping and abilities, I want to suggest, mimics this. The second step involves highlighting the specific cognitive abilities that are possessed by agents who understand. In particular, agents who understand have cognitive control. This is markedly different from the abilities possessed by agents who merely know. Agents who understand possess what I will call *U-abilities*, which display a different cognitive and epistemic profile. The third and last step involves using the clarity account of grasping to explain U-abilities.

2.4.1. Propositional Knowledge and Abilities

When we successfully learn things, our knowledge confers on us a range of cognitive abilities with respect to what we learn. Suppose, for example, you learn that oceanic white tip sharks have white tipped dorsal fins. Upon learning this, you acquire certain cognitive abilities. For instance, you acquire the ability to recognize white tip sharks when you are diving, to notice white tip sharks more often, to associate certain features with white tip sharks, and to articulate why this but not that shark is an oceanic white tip. In other words, your knowledge that p confers and underwrites a range of cognitive abilities with respect to p.

The abilities you gain upon learning that p is explained by your learning that p. In particular, it is because you are presented with a fact that you become disposed to recognize, notice, or articulate that fact after you learn it. Notice that it would not make much sense to say that your abilities explain your learning or knowledge. For instance, it does not make much sense to say that your ability to recognize white tip sharks explains or underwrites your learning that white tip sharks have white tipped

dorsal fins. It might be the case that your abilities are evidence that you know such fact (because they are a result of your knowledge), but nonetheless they do not explain your knowledge itself; it is the other way around.

That learning explains abilities in this way does not mean that all instances of propositionally learning that p puts us in a position to acquire abilities with respect to p. Suppose your scuba diving instructor tells you that oceanic white tip sharks have white tipped dorsal fins, but you have a misconception about what a shark is. For instance, you might have conception of sharks that is limited to hammerhead sharks (which possess flattened and laterally extended heads). As such, you have a weak grip on what sharks are or what they look like. In this case, upon learning that white tip sharks have white tipped dorsal fins, you do not acquire the range of cognitive abilities mentioned earlier. For example, upon encountering what is actually an oceanic white tip shark (which has an elongated pointed head) you will frequently fail to recognize it as such. This is because you conceive of sharks as possessing flattened and laterally extended heads, i.e., you have a misconception about sharks, so you will fail to recognize oceanic white tips as such. Thus, while we usually acquire a range of abilities upon learning that p, not all instances of learning that p entail that we acquire these abilities with respect to p. The main lesson I wish to draw here is that the relation between learning and abilities is only explanatory.

I want to suggest that the explanatory relationship between grasping and abilities is similar in some important respect to the relationship between learning and abilities. Recall the passage by Hills cited earlier:

> When you grasp a relationship between two propositions, you have that relationship under your control. You can manipulate it. You have a set of abilities or know-how relevant to it, which you can exercise if you choose. (2016, 663)

This passage (and the account behind it), I contend, does not adequately capture the explanatory relationship between grasping and abilities. Hills is suggesting here that grasping consists in these abilities such that abilities explain grasping. However, I think this conflates grasping and abilities in much the same way if we were to explain learning in terms of abilities. Hence, I think that grasping is what explains the abilities associated with understanding.

Now, in order to give a clear explanation of the relationship between grasping and abilities, we will now turn to the second step of specifying the cognitive and epistemic features of the abilities that agents who understand possess and exercise.

2.4.2. U-abilities

Agents who understand typically have a range of cognitive abilities. A scientist who understands DNA translation will be able to explain the mechanisms involved in DNA translation, draw inferences about the process, recognize certain features of it and so on. Similarly, a grandmaster who understands chess will be able to explain why a certain tactical position is better than another, to infer the best possible move, to notice open lines, imagine different mid-game variations and so on. Importantly, the abilities manifested by agents who understand are different from the abilities manifested by agents who merely know.[23] The set of abilities that agents who understand have constitute a kind of *cognitive control,* as

[23] This is in part due to the greater conceptual mastery that agents who understand possesses over their target, whereas for knowledge it merely suffices to possess a concept.

Alison Hills aptly puts it (2016). Cognitive control puts agents in a position to manipulate the objects of understanding in more various, robust, and intelligent ways. The cognitive control that is characteristic of understanding displays a specific cognitive and epistemic profile. Call the profile of the abilities characteristic of understanding '*U-abilities*'. Let us try to identify some core features of U-abilities.

(1) *Cognitive Control.* As I have mentioned, a core feature of U-abilities is that they constitute a kind of cognitive control. Thus, agents who understand φ are typically well-positioned to draw various connections, fashion explanations, answer various counterfactual questions about φ. But cognitive control is not limited to explanatory and inferential abilities. In addition, agents who understand φ are typically well-positioned to manipulate representations of, imagine, recognize, follow patterns relevant to, notice φ and so on.

(2) *Intelligent.* Importantly, when agents who understand manifest or exercise their cognitive control, their exercise of those abilities is intelligent. To highlight this, recall *chess bot.* In that example, we supposed that the behavioural and functional dispositions of the chess bot and the grandmaster are the same. That is, they both have the same abilities with respect to chess. Though the bot and the grandmaster have the same abilities, there is a significant difference between the exercise of their abilities. In particular, whereas the bot's exercise of their abilities is not intelligent, the grandmaster's exercise of her abilities is. Intuitively, there is a difference between, for instance, a bot's processing input and output through an algorithm, and on the other hand a grandmaster's thought process before making her moves. In addition, when the grandmaster exercises her abilities, her manifestation of those abilities contrasts with a mere knack at things. Thus, for instance, a grandmaster's exercise of her

abilities to win a game contrasts with a novice who may win through a mere knack or luck. The former is more intelligent than the latter.

(3) *Gradable*. Cognitive control comes in degrees. Two agents might differ with respect to the degree of cognitive control they possess based on the quantity of abilities they have. For instance, the expert geneticist possesses more abilities with respect to DNA translation than her novice student. However, and more importantly, two agents might possess the same set (i.e. quantity) of abilities yet they might still differ in the quality of the abilities they have. For example, a cellular biologist's ability to explain DNA translation will typically be better than a population biologist's ability to explain the same phenomena. Hence, the abilities that constitutes cognitive control are gradable.

2.4.3. Clarity Explains U-abilities

What explains U-abilities? In the case of propositional knowledge, learning that p confers a range of cognitive abilities with respect to p. Likewise, with respect to understanding, grasping φ confers a range of cognitive abilities with respect to φ. But unlike the acquisition of propositional knowledge, grasping puts us in a position to have, and insatiate the features of, U-abilities. In what follows, I am going to suggest that clarity explains why agents who understands possess U-abilities and instantiate its cognitive and epistemic features.

First of all, agents who understand have cognitive control because clear perception involves cognitive grip or hold. Recall that when one clearly perceives φ, one consciously seizes upon φ. This conscious feeling of cognitively seizing upon φ puts one in a position to acquire, by underwriting, various abilities that constitute cognitive control with respect to φ. For example, once the student in

DNA Translation has a clear perception of the mechanisms involved in DNA translation, the student is in a position to manifest cognitive control through, for instance, explaining how mutations depend on base pairing, successfully following an explanation of DNA translation, drawing conclusions and so on. Similarly, in *logic student*, prior to perceiving the law clearly, the student merely performed mechanical substitutions of the expression of the law. After perceiving the law clearly, the student is in a better position to explain why the law obtains, make controlled inferences relevant to it and so on. That is, the student now has cognitive control over the law. In both cases, the reason the agents come to have cognitive control over their target is because they come to perceive it clearly, and clear perception puts one in a position to acquire cognitive control because clear perception involves cognitively seizing upon the target.

Clear perception also puts one in a position to acquire and exercise a range of cognitive abilities that are not (primarily) explanatory or inferential. The chess grandmaster, for instance, can imagine certain mid-game variations, notice tactical patterns, (mentally) manipulate representations of the pieces into various arrangements and so on. What confers on the grandmaster these various cognitive abilities (that partly constitute her cognitive control) is her clear perception. It is because the grandmaster can 'see, feel and hold', i.e., cognitively seize upon, the chess arrangement (or whatever is the relevant target) that she has these cognitive abilities.[24]

[24] This is consistent with my earlier claim that abilities are not necessary for grasping. After all, just as not all instances of learning that p confers abilities with respect to p (recall the shark example), not all instances of clear perception confer cognitive control. Moreover, I am not suggesting the stronger claim that clear perception is necessary for cognitive control, such that any instance of cognitive control would require clear perception. Instead, my suggestion here is only explanatory and does not aim to establish any necessary connection. Clear perception explains why beings like us have cognitive control, if and when they do. As such, other mental states (or accidents even) might explain why some agents who understand have cognitive control. Nonetheless, I submit that, at bare minimum, phenomenal consciousness, must play a role in explaining why the manifestation of cognitive control is intelligent, as I will argue next.

Let me put the idea behind this in a different way. The idea here is that our acquaintance with objects puts us in a position to control and manipulate them. For example, my acquaintance with the mug on my desk, e.g., my hold and feel of it, gives me the ability to manipulate in various ways, e.g., lift it, turn it, balance it on one finger. So, because I grasp the mug, this puts me in a position to control and manipulate it. But notice here that my holding of the mug–i.e., my grasp or acquaintance–and my manipulation of it are distinct, *and* that I can manipulate it because I hold it. Clear perception is like grasping or being acquainted with the mug, having a firm hold or grip on it. Similarly, clear perception puts us in a position to acquire cognitive control just like grasping the mug puts us in a position to control it. Nonetheless, these are two distinct things.

Now onto the second feature of U-abilities, namely that when agents who understand exercise their cognitive control, their exercise of those abilities is intelligent. The fact that clear perception is a conscious grasp, and not an unconscious, merely functional disposition, explains why the exercise of cognitive control by agents who understand in intelligent. In *Chess bot*, we have seen the intuitive idea that the grandmaster's exercise of her cognitive control is intelligent, whereas the chess bot's, however exceedingly complex, is not. Clear perception explains this difference. In particular, the grandmaster's exercise of her cognitive control is intelligent because it is *guided by clear perception*. In contrast, the chess bot's exercise of its abilities is guided by, not clear perception, but a brute functional algorithm. Put differently, it is a mechanical display of ability.[25] The difference between these two agents with respect to their exercise of abilities is that one grasps while the other does not.

[25] I am aware that there is a significant dispute as to whether, and if so to what extent, phenomenal consciousness is required for the execution of skilful action. But I will put this point to the side for now.

The difference is not merely due to the bot's lack of representational capacities, however. For the same point can be made with respect to two human agents who manifest similar cognitive control but nonetheless one manifestation is intelligent while the other is not. Our student in *DNA translation* acquired a range of abilities that resembled the abilities involved in cognitive control. Yet, because the student acquired these abilities on the basis of rote memorization, the student's exercise of her abilities was not intelligent. Contrast this with an expert molecular geneticist who grasps the mechanisms involved in DNA translation. When the geneticist explains, infers, or exercises relevant cognitive abilities, his exercise of these abilities is intelligent. This is because the geneticist's exercise of his abilities is guided by clear perception. Therefore, the difference between these two agents with respect to their exercise of abilities is that one grasps while the other does not (and not because there is a difference in their representational capacities).

Hence, the exercise of cognitive control by agents who understand is intelligent because it is guided by conscious clear perception. Note that if grasping were analysed in terms of abilities, then we would not be able to explain why some instances of the exercise of cognitive abilities are intelligent whereas other instances are not. We would not be able, for example, to explain the difference between the intelligence of the grandmaster's exercise of her abilities and the lack of such intelligence in the chess bot. After all, both display the same functional dispositions with respect to chess. Given this, if grasping were analysed in terms of abilities (per the necessity claim of the ability account), then this would imply that both the grandmaster and the chess bot grasp the game (or chess). But this is a highly counterintuitive consequence. However, once we see that grasping is distinct from and explanatorily

prior to U-abilities, we can explain why some instances of the exercise of cognitive control are intelligent in such a way that they qualify as U-abilities.

Third, clear perception also explains why cognitive control is gradable. As we have seen in chapter 1, clear perception is gradable along its various features. The degree of cognitive control an agent possesses is proportional to the clarity of their perception. Hence, for example, the chess grandmaster exhibits a greater degree of cognitive control than a novice because her perception is clearer.

Therefore, clarity is well-poised to accommodate and explain the various features of U-abilities. In doing so, clarity also explains why some manifestations of cognitive abilities count as U-abilities while others don't. The reason is because U-abilities, the sort of abilities possessed and exercised by agents who understand, are guided by the agent's clear perception. In sum, U-abilities:

- Involve *cognitive control* because clear perception involves cognitively seizing upon the target,
- Are *intelligent* because they are guided by clear perception, and
- Are *gradable* because clarity comes in degrees.

The clarity account of grasping explains the relationship between grasping and abilities. The clarity account says that clear perception, and hence grasping, is explanatorily prior to abilities.

2.5. Is Clear Perception an Ability?

One might immediately worry that my talk of clear perception ignores the fact that clear perception is also a kind of ability. In particular, one might suggest that understanding is an ability to see things clearly. For example, the chess grandmaster has the ability to perceive a chess game clearly; the

geneticist has the ability to perceive the mechanisms involved in DNA translation clearly, and so on. Thus, agents who understand and grasp are disposed to clearly perceive the object of understanding. Now, if clarity is a kind of ability, and my claim that grasping and abilities are distinct is plausible, does this undermine my account of the relationship between clarity and the abilities involved in understanding? I don't think this undermines my argument for two reasons.

First, as I mentioned at the outset, the occurrent state of clear perception has a dispositional counterpart. A similar relation is found between judgement and belief states. Beliefs are dispositional states. In particular, a belief that p is a disposition to ocurrently judge that p. If I believe that Cairo is Egypt's capital, then I am disposed to ocurrently judge that Cairo is Egypt's capital whenever prompted. In addition, there is an important explanatory relation here. The possession of a belief that p is explained in terms of the occurrent judgement that p. What it is to believe that p is to be disposed to judge that p. The occurrent state has a dispositional counterpart, and the dispositional counterpart is explained in terms of the occurrent state.

The relation between the ability to perceive clearly and the occurrent state of clear perception is just the same as the relation between belief states and occurrent judgements. The ability to perceive things clearly, a dispositional state, is explained in terms of occurrent clarity. What it is to have the ability to perceive clearly is to be disposed to have an occurrent clear perception. Thus, occurrent clarity is explanatorily prior to abilities.

Second, the ability to perceive clearly contrasts with the cognitive dispositions centrally linked with U-abilities. With regards to the cognitive dispositions involved in cognitive control, I take them to be linked to action. For example, when one possesses cognitive control one is able to explain, infer,

imagine, recognize and so on. That is, one *knows how* to perform certain cognitive functions. Since know-how is involved here, and know-how is linked to action, I take the abilities involved in cognitive control to be mental actions. In contrast, the ability to perceive clearly doesn't involve know-how and it is not linked to action. There are two reasons why I think this is the case.[26]

The first reason rests on a solution for a perceived ambiguity in know-how attribution. The ambiguity is that some ability attributions entail know-how attributions and some don't (and vice versa). For example, one is able to add numbers only if one knows how to add numbers. Whereas a skillful taekwondo athlete might be able to do a triple turn hook kick but without knowing how to do it (e.g., she might have a false belief about what it takes to do it). Bengson and Moffett (2007) suggest that ability attributions entail know-how attributions only when the agent has a correct conception of how the action is performed. In other words, ability attributions entail know-how attributions only if the exercise of the ability is guided by one's grasp. Now, in our case, the ability to perceive clearly cannot entail know-how attribution because it cannot be guided by one's grasp, it is the grasp itself. It doesn't make much sense to claim that grasping is guided by grasping. Hence, one difference between the abilities involved in cognitive control and the ability to perceive things clearly is that the former entails know-how attribution while the latter doesn't.

The second reason is that clear perception is not a mental action that one can know how to perform. When one perceives something clearly one has a specific kind of conscious awareness. Clear perception is something that happens to you; you do not (and indeed cannot) consciously and

[26] The two reasons are controversial and would need significant argumentation. Luckily, my general argument doesn't turn too much on this. So the reader should read this in the spirit of a suggestion to be developed by more advanced clarity account of grasping.

voluntarily form a clear perception. The case is similar in visual perception. When you visually perceive an object, you do not consciously form that perception, the experience just happens to you. Since that is the case, then there is no sense in which you perform or exercise a clear perception in a similar way to that of other mental actions. Simply put, clear perception is a conscious awareness and not a mental action. As such, there is no informative sense in which one can know-how to perceive clearly in a similar way, for example, as one can know how to explain. Thus, the ability to perceive clearly is a disposition that doesn't entail a know-how attribution because the ability to perceive clearly is not linked to a mental action.[27]

Now, this claim is consistent with knowing how to do actions that result in clear perception. For instance, one can directly attend to things, follows explanations of them, or reason through their proof. But these actions only put one in a position to perceive clearly and are not the perception itself. In the visual domain, I can turn around to see the person standing behind me, putting myself in a position to see them, but my perception of the person just happens to me and is distinct from my action of turning around. Similarly, clear perceptions are just given to one. As I will argue in the next chapter, *clear perception is an epistemically basic mental state.*

[27] The idea in this paragraph turns on the notion of intentional actions. I take it that the mental actions considered here (e.g. explaining, inferring, imagining, following etc.) are intentional actions, hence they require intentions. In contrast, I think there is no sense in which you can intend to perceive clearly (because clarity is an awareness that simply happens to you) and therefore clear perceptions cannot be intentional actions. I am aware of the difficulty this proposal raises. In particular, some argue that perception, particularly in the sensory domain, is a kind of action (e.g. Noë 2004)). My hunch regarding these proposals is that the awareness involved in perception underwrites and the action concerned in perception. In this way, perceptual awareness is (explanatory) prior to perceptual action. Unfortunately, I do not have the knowledge nor the space to engage any deeper with this discussion.

Given all of this, we can see that the ability to perceive clearly is a disposition to conscious clarity. That disposition is sufficiently different from the cognitive dispositions involved in U-abilities in that it doesn't involve know-how nor is it linked to action.

2.6. Conclusion

To briefly summarize, I argued in this chapter that cognitive abilities are neither necessary nor sufficient for grasping. I further argued that the explanatory relationship is actually the other way around. Clarity is what explains the cognitive abilities associated with understanding. And while agents may be disposed to perceive clearly, this disposition is sufficiently different from the cognitive abilities that are central to the ability account of grasping.

Clarity structures significant cognitive and epistemic features of understanding. Now, since understanding typically proliferates in social settings, can understanding, like propositional knowledge, be acquired on the basis of testimony? In the next chapter, we will examine what the clarity account of grasping implies for the testimonial transmission of understanding.

CHAPTER 3

CLARITY, TESTIMONY, AND UNDERSTANDING

3.1. Introduction

We often come to know things through testimony. For instance, while I am in Kingston, Canada, I can come to know that it is raining in Alexandria, Egypt based on my friend's testimony. Similarly, children acquire moral knowledge through the testimony of their parents, and students often acquire scientific knowledge via their teachers' testimony.

But can we also come to *understand* things through testimony? Many philosophers agree that we can't.[28] For instance, Linda Zagzebski writes:

> Knowledge can be acquired through testimony, whereas understanding cannot be … A state of knowing can be conveyed from one person to another because knowing is a form of believing and belief can be conveyed from one person to another. Understanding cannot be transmitted in that way. (Zagzebski 2008, 145)

Some of the important reasons as to why understanding cannot be transmitted through testimony have been thought to be the following:[29]

[28] The relationship between understanding and testimony has been a theme of interest to scholars of ancient philosophers too. See, for example, Burnyeat (1987); Nehamas (1985); Moravcsik (1979) and Nawar (2015; 2013).
[29] Throughout the paper I will use 'acquisition' and 'transmission' through testimony interchangeably.

> Knowledge may easily be acquired through the testimony of experts; understanding, by contrast, seems more demanding and requires that the epistemic agent herself … grasps connections (Baumberger, Beisbart, and Brun 2017, 3)

Or again,

> If someone who knows asserts: "q is why p" and you understand what they say and rightly trust them, you come to know why p. But that wouldn't be true if knowledge required cognitive control, because usually this cannot be passed on through assertion alone, or at least not easily. (Hills 2016, 670)

> As something like this [i.e. grasp] is widely thought to be an integral component of understanding, we get a clearer picture of why understanding isn't something that can be given from speaker to hearer as knowledge can; for whatever grasping is, *it isn't something that can just be "handed over"* … No one can exactly induce this in the hearer. (Gordon 2017, 302; emphasis in original)

According to these philosophers, understanding cannot be just 'handed over' from speaker to hearer because understanding is either demanding, requires cognitive control, or involves grasping.[30]

[30] The view that understanding cannot be transmitted through testimony has been recently resisted on various grounds. Recent attempts include: Grimm (2020); Malfatti (2019; 2020); Boyd (2017) and Hu (2019). Most, but not all, of these authors argue against the know-how or ability view and cognitive achievement view outlined in the next paragraph. I accept a lot of the arguments they make against these views. Indeed, in this paper I will build on some the criticisms they advance against these views. However, in this paper, I give an alternative reason as to why understanding cannot be transmitted through testimony that has not been yet scrutinized in their attempts. So I don't think what they argue in their work detracts from the view I develop in this paper.

These are fairly general remarks. So, more specifically, why think that understanding cannot be acquired through testimony? One view is that understanding involves a kind of ability or know-how which in turn cannot be transmitted through testimony. Call this *the know-how account*. A second view maintains that understanding involves a distinct kind of cognitive achievement which renders it incompatible with testimonial transmission. Call this *the cognitive achievement account*.

Though I agree with the claim that understanding cannot be transmitted through testimony, I do not think the available views succeed in identifying the reason why this is the case. In fact, I will argue that we have good reason to think that even if understanding involves know-how or a distinct kind of cognitive achievement, understanding can be still transmitted through testimony. Hence, these views do not succeed in motivating the claim that understanding cannot be transmitted through testimony.

My aim in this chapter is to provide an alternative reason as to why understanding cannot be transmitted through testimony. On my account, the reason understanding cannot be transmitted through testimony has to do with the conscious phenomenology of understanding. In particular: understanding p involves grasping p; grasping p involves seeing p clearly or *clarity*; clarity is an epistemically basic phenomenal mental state; and epistemically basic mental states cannot be transmitted through testimony. Hence, the clarity account of grasping implies that understanding cannot be transmitted through testimony.

Here is the plan. In section 2, I sharpen the sense in which we ask whether a given epistemic state is acquired or transmitted through testimony. In section 3, I sketch three testimony cases that will form the basis of our discussion. In sections 4 and 5, I will evaluate the know-how and cognitive

achievement accounts. In section 6, I use the clarity account of grasping to explain why understanding cannot be transmitted through testimony.

3.2. Transmitting the Goods

What does it mean to 'hand over' an epistemic good from speaker to hearer? That is, when we talk about transmitting or acquiring a given epistemic good (e.g. knowledge or understanding) through testimony, what sort of relation are we tracking? One natural way to gloss this relation is in terms of 'dependence' or 'basing'. So, for instance, when I know that it is raining is Alexandria on the basis of my friend's testimony, my knowledge is based and depends on this piece of testimony.

Importantly, this dependence or basing relation is not merely causal, it is also epistemic.[31] In one sense, testimony may be causally relevant in the formation of the corresponding mental state in the recipient. For example, if you tell me that it is raining outside and this causes me to look outside and see that is raining for myself, then your testimony is causally relevant to the formation of my belief. In another sense, testimony may be epistemically relevant in the formation of the corresponding mental state in the recipient. For instance, my belief that it is raining in Alexandria is dependent and based on my friend's testimony. In the epistemic sense, my state epistemically depends or is based on the relevant piece of testimony.

To expand on the same thought, an instructive case stems from the formation of perceptual beliefs. Suppose I look outside and see that it is raining. I then form the belief that it is raining. In one sense, my perceptual experience causes me to form the belief. But not only is my belief causally based

[31] See Lackey (2006, 443) and Hawley (2010).

on my perceptual experience, my belief is also epistemically based on it. This could mean that my belief possesses some of its epistemic properties, e.g. vis-à-vis justification, in virtue of its being based on the perceptual experience.[32] In much the same way, beliefs that are based on testimony are not only causally based on testimony, but are also epistemically based on it.

Hence, when we say that a mental state is transmitted or acquired through testimony, we mean that the mental state is epistemically dependent or based on the speaker's testimony. In this sense, my belief that it is raining in Alexandria is acquired through testimony only if it is epistemically based on my friend's testimony. Hence, to the extent that my belief is acquired through testimony, then my belief is epistemically based on it.

It is the epistemic sense of testimonial transmission of epistemic goods that we are concerned with when we ask whether understanding can be transmitted through testimony. Therefore, to put the question more precisely, can understanding be epistemically based on testimony in the sense outlined above?

3.3. Testimony Cases

Now that we have in view what the transmission relation looks like, let us consider three examples of testimony cases in which, at least intuitively speaking, understanding fails to be transmitted through testimony. In the sections that follow, we will consider attempts to explain this intuition.[33]

[32] In turn, this will have to do with some justification conferring property of the perceptual experience, for example its reliability or its phenomenal character.

[33] In the following examples I talk in terms of their understanding involving belief states. However, I am not committed to this. The attitude involved might be a conception as John Bengson maintains (Bengson 2017; 2015a).

Faulty Wiring

A parent and their young child watch a house fire. They both wonder what caused it. Based on the firefighter's testimony, they both come to believe that the fire was caused by faulty wiring.[34]

Descartes's Argument

A first-year student is studying Descartes's ontological argument for the first time. On the basis of her teacher's testimony, the student comes to believe that Descartes's argument is the following: God exists because God is a supremely perfect being.

Logic Student

A student is studying logic for the first time. Based on the instructor's testimony, the student comes to believe DeMorgan's law, that the negation of a disjunction is logically equivalent to the negation of both disjuncts in a conjunction.

Do you think that the child and two students can come to understand based on testimony alone? If you share my intuition (which is rather common), testimony fails to transmit understanding in these cases. More specifically, it seems that while both parent and child come to believe, even possibly know, that the house burned because of faulty wiring, the parent but not the child understands why it burned down. Similarly, testimony alone is not sufficient for the student to grasp Descartes argument, how its conclusion and its premises hang together. And believing rules of logic based on what our teachers

[34] This is a familiar case in the understanding and testimony literature. It originates with Pritchard (2008, 81). This specific formulation is due to (Sliwa 2015, 64).

say is not sufficient for us to grasp these rules. In other words, in these cases, it is at least still an open question as to whether the subject grasps the relevant target.

So far this is just a sketch of a (fairly common) intuition.[35] The know-how account explains this intuition by maintaining that since understanding involve a kind of know-how, and know-how cannot be (easily) transmitted through testimony, then this explains why testimony fails to transmit understanding in these cases. On the other hand, the cognitive achievement account explains this intuition by maintaining that understanding involves a kind of cognitive achievement that is primarily creditable to the agent. However, in the cases at hand, insofar as they acquired their resultant states on the basis of testimony, the epistemic credit for the resultant states of our subjects is not primarily creditable to the exercise of their cognitive abilities.

I think there is a more intuitive way to gloss what is happening in these cases, however. In particular, the subjects do not understand or grasp the relevant target because it is not clear to them. And whether testimony can transmit understanding has to do with whether testimony can make it clear to them or properly induce such clarity. Indeed, we talk about clarity as an indicator of understanding all the time. For instance, when we want to check whether students understood something, we ask them whether it is clear. And conversely, when things are not clear to one, there is

[35] There are several ways one can react to this intuition. Philosophers who are sympathetic to the thesis that understanding reduces to knowledge might explain away this intuition by maintaining that the subjects don't have sufficient background knowledge relevant to their target, and it is for this reason that they don't understand (see, e.g. Sliwa 2015). Alternatively, one might reject this intuition all together and maintain that our subjects in fact understand. However, both these reactions incur a significant explanatory debt on their proponents where I think the debt is exceedingly hard to pay, because proponents of these reactions would ultimately produce accounts of understanding that cannot accommodate and explain core features of the epistemic state. For an explanation of this see (Bengson 2017, 41–42).

reason to think that one lacks understanding.[36] As I will argue, it is precisely because understanding involves clarity that understanding cannot be transmitted through testimony. However, before motivating this account, let us consider in turn how the know-how and cognitive achievement accounts vindicate the intuition that and explain why understanding cannot be transmitted through testimony.

3.4. Know-how Account

3.4.1. Hills' Cognitive Control Account

One main reason to think that understanding cannot be transmitted through testimony is that understanding involves a kind of know-how which renders understanding highly resistant or possibly immune to such transmission. One of the main proponents of this account is Alison Hills (2009, 2015). Hills maintains that understanding involves a kind of intellectual know-how one has with respect to explanations.[37] In particular, when one grasps an explanation, one has a kind of cognitive control vis-à-vis the explanation. Hills elaborates on the abilities involved in cognitive control. According to her, when one understands why p, one can successfully:

(1) Follow some explanation of why p given by someone else.

(2) Explain why p in your own words.

(3) Draw the conclusion that p (or probably that p) from the information that q.

[36] For example, for a long time, Anselm's ontological argument was not clear to me. Given this, there was sufficient reason for me to think that I didn't understand it.

[37] In particular, Hills' main target is the state of understanding-why. My arguments in this chapter applies to understanding-why and other forms of understanding too.

(4) Draw the conclusion that p' (or probably p') from the information that q' (where p' and q' are similar to but not identical to p and q).

(5) Given the information that p, give the right explanation, q.

(6) Given the information that p', give the right explanation q'. (Hills 2016, 663)

This suite of abilities, Hills contends, form the cognitive control that is characteristically involved in understanding. Moreover, she maintains that these abilities cannot be (easily) acquired on the basis of testimony alone. So why think that cognitive control cannot be so acquired?

One reason is because cognitive control is a kind of know-how and know-how cannot be (easily) acquired through testimony.[38] To see why one might think that know-how cannot be acquired through testimony, consider the following example that highlights a difference between know-how and propositional knowledge. Suppose we encounter a paraplegic cognitive neuroscientist who possesses a significantly large set of propositional knowledge about what is involved in doing Taekwondo. We may assume he knows a significant amount of information about what is involved in executing certain kinds of kicks. Nonetheless, though the scientist knows a lot about what is involved in doing Taekwondo, it is difficult to say that he knows how to do Taekwondo.

The upshot of this example is twofold. First, it suggests that know-how is irreducible to know-that. Knowledge how to Φ requires more than propositional knowledge about Φ-ing. If all what know-

[38] For the idea that transmitting know-how through testimony is typically hard see, e.g., Hills (2013); Poston (2016); Carter and Pritchard (2015).

how required was know-that, then it seems that the neuroscientist should know-how to do Taekwondo after all.[39] As we have seen, this is implausible.

The second upshot suggests that what know-how requires (in addition to, or perhaps as opposed to, propositional knowledge) is practice or a practical mode of representation.[40] Suppose, for instance, that an expert Taekwondo coach is teaching a novice. Although the expert can tell the novice how to execute certain kicks, and so, for example, the novice can come to know that in order to do X they need to do Y, it seems that the novice can't acquire the ability to do X based on the expert's testimony. What is required, in addition, is practice.

With these two upshots in mind—that know-how is irreducible to know-that and that know-how requires practice—we have reason to think that know-how cannot be transmitted through testimony. Know-how cannot be handed over from sender to recipient in the same way that propositional knowledge can.

Let us now put more generally the argument from know-how for the claim that understanding cannot be transmitted through testimony:

(1) Understanding involves a kind of know-how.

(2) Know-how cannot be transmitted through testimony.

(3) Therefore, understanding cannot be transmitted through testimony.

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[39] To complicate matters, one might say that what the neuroscientist actually lacks is the ability, but he can still possess know-how. My reply is that although one can lack the ability to φ while possessing knowledge how to φ, knowledge how would still require a practical mode of representation that the neuroscientist might lack (see the following footnote).

[40] Stanley and Willlamson (2001) maintain that knowledge how reduces to know that plus a practical mode of presentation.

I do not think this argument succeeds. Let us turn next to see why that is the case.

3.4.2 Problems with Know-how Account

First Problem: There are several problems with this argument. First of all, the know-how involved in understanding can be accounted for in terms of propositional knowledge. In particular, the know-how involved in understanding why *p* may not be different in kind than the abilities involved knowing that *p* because *q*[41].

Consider *faulty wiring*. In this case our intuition suggested that although the child knows why the house burned down, she does not understand why.[42] According to the know-how accounts of understanding, the reason why the child does not understand why is because the child lacks something like abilities (1)-(6). For instance, given the fact that the house burned down the child cannot give the correct explanation that it was because of faulty wiring, or perhaps she cannot draw the conclusion that the house burned down from the fact that there was faulty wiring.

However, it is plausible to think that the know-how required for understanding is also involved in propositional knowledge. To see this, consider whether we would attribute knowledge-that to the child in cases where she lacks similar know-how. For example, were we to ask the child why the house burned down, she would tell us that it was because of faulty wiring. Suppose we ask her further whether it was possible that the house burned down because of magic spices and she answers 'maybe!'. If that

[41] Sullivan (2018) argues extensively for the claim that the abilities constitutive of understanding why are also constitutive of know-that. While Hu (2019) argues that the abilities involved in understanding can be accounted for in terms of counterfactual analyses of know-that. In both cases, they argue, the wedge between understanding why and know-that cannot be drawn by appealing to abilities.

[42] I take knowledge why p to amount to knowledge that p because q.

is the case, then it is doubtful that the child really knows that the house burned down because of faulty wiring. Propositional knowledge requires a kind of counterfactual sensitivity to the truth or an ability to eliminate epistemic possibilities. That is, if in the nearest possible world the child believed that the house burned down because of magic spices (instead of faulty wiring), then, in the actual world, she does not genuinely know that the house burned down because of faulty wiring. Being counterfactually sensitive to the truth or having an ability to eliminate epistemic possibilities resemble the know-how said to be involved in understanding, if not constitutive of it.

If the kind of know-how said to be constitutive of understanding why is also constitutive of propositional knowledge—or at least are not different in kind—and, in addition, propositional knowledge can be transmitted through testimony, then the fact that understanding involves know-how cannot motivate the claim that understanding cannot be transmitted through testimony. After all, if propositional knowledge involves the same or at least similar abilities but nonetheless can be transmitted through testimony, then we should have no reason to think that understanding cannot be transmitted through testimony because it involves the same or at least similar abilities.

Second Problem: A second problem facing the know-account sheds doubt on premise (2). More exactly, we have reason to think that know-how, whether involved in understanding or propositional knowledge, can sometimes be (easily) transmitted through testimony.[43]

Consider the following variation of an example provided by Malfatti (2020). Suppose I ask you for a simple falafel recipe. You report how to make it in these simple steps:

[43] For similar arguments see Grimm (2020) and Malfatti (2020) for a discussion related to understanding and know-how. See Hawley (2010) for discussion related to the transmission of know-how generally.

> Soak fava beans overnight. Combine soaked fava beans with parsley, cilantro, dill, onions, cumin and salt into a food processor for dough like consistency. Shape the mixture into balls and fry them over medium heat until golden brown.[44]

Do I learn how to make falafel based on your testimony? On the face of it, I do. I now know how to make falafel based on your testimony. We often gain know-how easily through mundane daily interactions like this.[45]

Of course, whether one can gain a specific know-how (e.g. know-how to Φ) on the basis of testimony in cases like the above seems to rest on the fact that one already possesses a set of cooking abilities (e.g. one knows-how to cook).[46] However, the know-account is not clear on this point. More exactly, is it not clear whether the transmitted ability is a specific or general one.[47]

There is still an intuitive pull to the idea that know-how and abilities cannot be transmitted through testimony, however. I suggest that we can make sense of this pull by considering the two different examples of know-how provided in this section, Taekwondo and cooking a simple recipe. In the Taekwondo case, we had an example of a complex ability, whereas in the cooking case the ability was simple (at least in comparison). We judged that knowing how to do Taekwondo cannot be acquired on the basis of testimony, whereas, in contrast, one can come to know how to make a recipe

[44] There is an important distinction to made here between Egyptian falafel (of which our recipe is an instance) and other sort of falafel recipes. The former is much more superior in taste, texture and overall quality. No argument required. This example is inspired by and dedicated to Federica Malfatti.

[45] Hawley (2010) provides an interesting discussion of learning how and in particular acquiring know-how on the basis of testimony. Others have emphasized that we can sometimes transmit abilities by showing rather than telling, which is important in the propagation of knowledge in educational settings, see, for example, Small (2020); Kotzee (2020).

[46] As Malfatti (2020, 67) notes too.

[47] Moreover, this might depend on one's prior skill set.

on the basis of testimony. Thus, whether know-how can be transmitted through testimony seems to be a function of the complexity of the domain relative to which one bears the ability, and not, as premise (2) implies, a feature of know-how as a kind.

In sum, the argument from the know-how account against the testimonial transmission of understanding fails to motivate its conclusion for two main reasons. First, the abilities involved in understanding seem to be the same as the abilities involved in propositional knowledge. But if the abilities involved in propositional knowledge do not render it immune to testimonial transmission, then why should they grant understanding such immunity? Second, even if the abilities involved in understanding are different, it is plausible to think that abilities and know-how can sometimes be transmitted through testimony. In cases where testimony fails to transmit know-how, this might just be a function of the complexity of the know-how in question or the domain towards which one bears the ability. Hence, the claim that understanding involves abilities is not sufficient to motivate the claim that understanding cannot be transmitted through testimony.

3.5. The Cognitive Achievement Account

One way to think about the epistemic state of understanding is to think of it as a state involving a distinct kind of cognitive achievement. Some claim that since understanding involves a distinct kind of cognitive achievement this renders it incompatible with testimonial transmission. First, let us consider what the cognitive achievement involved in understanding is and then, second, consider why this putatively renders it incompatible with testimonial transmission.

3.5.1. Pritchard's Account

Duncan Pritchard holds that understanding essentially involves a strong cognitive achievement.[48] Generally put, cognitive achievements are cognitive successes which are (a) primarily creditable to the exercise of the agent's relevant cognitive abilities (as opposed to being attributed to luck or someone else's agency) (2016, 37). In addition, what makes the cognitive achievement involved in understanding particularly distinct is that it is a *strong* cognitive achievement, where strong cognitive achievements (b) involve overcoming a significant obstacle or exercising significant cognitive effort.[49]

The idea behind this account of understanding has a strong pull. In particular, many seem to think that coming to understand something is an active process of the mind. When one comes to understand why p, for example, one puts together and connects explanations relevant to p, an active grasp of connections by the mind. This is usually contrasted with the acquisition of propositional knowledge, where it is possible that one comes to know that p in a fairly passive way. To voice the idea differently: whereas know-that can be acquired passively and second-hand, understanding, on the other hand, with its active nature, can only be acquired firsthand.[50]

It is easy to see how this picture of understanding is unfriendly to testimonial transmission. On the one hand, the cognitive achievement account maintains that understanding involves a strong cognitive achievement. The two features of strong cognitive achievements (a and b above) correspond

[48] Pritchard's account can be found in (2009; 2014; 2016).
[49] Pritchard's discussion in the various papers takes place within the question of whether understanding is reducible to propositional knowledge. The idea behind his account is that while understanding is a strong cognitive achievement, propositional knowledge is not. Therefore, he argues, understanding and propositional knowledge come apart because they are different kinds of cognitive successes.
[50] See Sosa (2019) for an interesting discussion of the same idea.

to the general conception of understanding voiced above. Since understanding is a kind of first-hand knowledge, understanding involves a cognitive achievement which is primarily creditable to the exercise of the agent's cognitive abilities. And since understanding involves an active grasp of connections by the mind, it involves overcoming a significant obstacle or exercising significant cognitive effort.

On the other hand, however, one can acquire testimony-based epistemic states (e.g. belief or knowledge) such that one's epistemic state is not (a) primarily creditable to the exercise of the agent's cognitive abilities nor does it (b) involve overcoming a significant obstacle or exercising significant cognitive effort. That is, such that one's testimony-based state is not a strong cognitive achievement. For example, when I gain testimonial knowledge that it is raining in Alexandria based on my friend's report, my knowledge is not primarily creditable to the exercise of my cognitive abilities; rather, my knowledge is primarily creditable to the exercise of my friend's cognitive abilities, in this case, her perceptual abilities. To that extent, my knowledge is second-hand. Hence, it is not a cognitive achievement on my part. Nor, moreover, does my knowledge that is it raining in Alexandria involve overcoming a significant obstacle or exercising significant cognitive effort. I easily gained this knowledge simply from trusting my friend and understanding the content of her report; no significant cognitive effort was exercised. My knowledge was acquired passively, involving no active grasp of connections by the mind. Hence, my knowledge is not a strong cognitive achievement. [51]

[51] For further discussion of this idea see Lackey (2007).

This account is poised to accommodate and explain the intuition about the testimony cases. According to this account, the child and students do not come to understand on the basis of testimony because their resultant state is not a strong cognitive achievement. For instance, while the student comes to know Descartes's argument on the basis of her teacher's testimony, she doesn't understand it because her knowledge is not primarily creditable to the exercise of her cognitive abilities nor does it involve any significant cognitive effort. Instead, it is primarily creditable to the teacher and is acquired in a fairly passive way.

Thus, according to this picture, while understanding is an active firsthand affair that is primarily creditable to the agent, the acquisition testimonial knowledge is, at least for the most part, a passive second-hand affair that is not primarily creditable to the agent exercise of her relevant cognitive abilities. Therefore, insofar as understanding involves a strong cognitive achievement, understanding cannot be transmitted through testimony. We can put the argument from strong cognitive achievement for the claim that understanding cannot be transmitted through testimony as follows:

(1) Transmission of an epistemic state Φ through testimony is incompatible with Φ involving a strong cognitive achievement.

(2) Understanding involves a strong cognitive achievement.

(3) Therefore, understanding is incompatible with testimonial transmission (i.e. understanding cannot be transmitted through testimony).

3.5.1. Problems with Cognitive Achievement Account

First Problem: The first problem for the cognitive achievement account concerns premise 2, that understanding involves a strong cognitive achievement. In particular, understanding can sometimes be acquired in a way such that it is not (a) primarily creditable to the exercise of the agent's cognitive abilities nor (b) involving overcoming a significant obstacle or exercising significant cognitive effort. That is, understanding can be acquired in a way such that it does not count as a strong cognitive achievement.

To see this, consider the parent in *faulty wiring*. First, it seems that the epistemic credit for the parent's state primarily goes to the firefighter who figured out why the house burned down. After all, it is the firefighter who investigated the fire scene and traced down its causes. Nonetheless, this does not seem to preclude the parent from understanding why the house burned down upon receiving the firefighter's report. Furthermore, upon receiving the firefighter's report that the house burned down because of faulty wiring, it seems that the parent comes to understand why the house burned down without exercising significant cognitive effort or overcoming any obstacles on his way to grasping the cause of the fire. In fact, his grasp of the cause seems to be quite effortless. The reason, one might think, is because the parent already has a sufficient background conception about the causes of fire. So, when he receives the report, he effortlessly understands why the house burned down. Following Boyd (2017), one might call these cases of 'easy understanding'.

Consider yet another example of easy understanding. My friend in Alexandria tells me that she is feeling the blues because it is raining. Since I think she is fairly reliable with respect to her psychological state, I come to believe her. Do I also understand why she is feeling down? Most

probably, yes: I grasp the reason why she is feeling down, namely because it is raining. In these cases, understanding, so it seems, does not involve a strong cognitive achievement. If so, then we have prima facie reason to doubt the potency of premise 2.

Cases of easy understanding seem to rest on two things: the simplicity of what is understood, and the existence of a sufficient background conception that makes coming to understand more or less easy for the agent. Thus understood, cases of easy understanding pose a problem specifically for condition (b) of the cognitive achievement account: that understanding involves overcoming significant obstacles and exercise of cognitive effort (i.e. that it involves a *strong* achievement).

However, cases of easy understanding do not necessarily undermine condition (a) of the cognitive achievement account, that coming to understand is primarily creditable to the exercise of the agent's cognitive abilities. In particular, one can still acquire understanding 'easily' yet one's understanding be still creditable to the exercise of one's own cognitive abilities. As we have seen, what this condition specifies is the firsthand nature of understanding. However, this need not depend upon the manifestation of significant cognitive effort. In this regard, Pritchard offers a handy suggestion in another paper (Pritchard 2016). What condition (a), and in effect understanding, involves is that one sees things for oneself, where this implies having a direct apprehension of or acquaintance with the object of understanding–i.e. a kind of intellectual seeing. The idea is easily seen by reflecting on cases of seeing in the visual domain. For instance, I do not see for myself that it is raining in Alexandria whereas, in contrast, my friend sees for herself that that is the case. She is directly acquainted with this

fact through her perception.[52] Similarly, when it comes to understanding, what matters, so it seems, is that one has this kind of direct apprehension with the object of understanding—an intellectual seeing of sorts. Therefore, while cases of easy understanding undermine the potency of premise 2 (specifically with respect to what strong achievements involve), understanding still seems to require this firsthand component stipulated by condition (a) of the cognitive achievement account.

Second Problem: The second problem for the cognitive achievement account concerns premise 1, that transmission of epistemic states through testimony is incompatible with those epistemic states being strong cognitive achievements.

We accepted it as a datum that propositional knowledge can sometimes be transmitted through testimony. In some cases, however, the acquisition of propositional knowledge sometimes involves overcoming a significant obstacle or exercising significant cognitive effort; that is, they sometimes count as strong cognitive achievements. For instance, in a university physics class, a student may come to propositionally know a complex law of quantum mechanics through testimonial interaction with her teacher. In one sense, the student epistemically depends on her teacher's testimony for her knowledge. But in another sense, the student cannot come to propositionally know this complex law without exercising her cognitive abilities in such a way that may involve overcoming obstacles or manifesting significant cognitive effort. In this case, we might say that the student partially depends on the teacher's testimony, while at the same time trying to actively make connections and interpret the teacher's report. If such a case is plausible, then the kind of epistemic dependency required by

[52] While this suggestion seems to side with a naïve realist account of perception, it can also be made compatible with other view of the nature of perception. So, for instance, my friend could be directly acquainted with her *representation* that it is raining in Alexandria in a way that I am not and so on.

testimonial acquisition may be compatible with the epistemic state in question being a strong cognitive achievement.

The plausibility of this case turns on how we conceive of the epistemic dependence relation required by testimonial transmission. A strict conception of transmission which requires full epistemic dependency on speakers' reports will judge that these cases do not qualify as instances of testimonial knowledge, much less understanding. However, such a strict conception doesn't seem quite viable. If the strict conception is true, then a whole lot of our knowledge is under attack. After all, a great deal of our knowledge is gained through partial epistemic reliance on others and partial reliance on our cognitive abilities. Thus, this might call for a more lenient conception of testimonial transmission that accommodates this fact about the propagation of knowledge in social settings.

There is still more room to evaluate the argument from cognitive achievement. But since this is not my primary target we should move on. To summarize what has been argued so far, we have seen that understanding can sometimes be acquired passively. This gives us reason to think that understanding doesn't essentially involve a *strong* cognitive achievement. In addition, we have seen that some strong cognitive achievements are sometimes compatible with their acquisition through testimony. Nonetheless, the cognitive achievement account lends us an important insight into the nature of understanding. Understanding involves a kind of intellectual seeing that puts us in a position to see things for ourselves, that is to directly apprehend the object of understanding.

3.6. Clarity and Testimony

So far, we have seen that given the know-how account, or given the understanding as cognitive achievement account, it does not yet follow that understanding cannot be transmitted through testimony. We have also seen from reflecting on these accounts that understanding involves a kind of intellectual seeing. This section gives an account of this intellectual seeing. The place to look lies precisely in the metaphor of grasping that is involved in understanding.

We have come full circle. We began with critiquing various accounts as to why understanding cannot be transmitted through testimony, and we highlighted the areas where they were deemed insufficient. We then developed an account of grasping in terms of clear perception. Hence, we are now in a position to consider what the clarity account of grasping implies about the relationship between understanding and testimony. In this section, I will argue that since grasping involves clarity, grasping cannot be transmitted through testimony. The reason is because clarity is an epistemically basic state and therefore cannot epistemically depend on testimony.

Consider again the testimony cases that guided our discussion. The clarity account implies that the difference between not grasping and grasping is matter of having a clear perception. Thus, the father grasps why the house burned down because he clearly perceives it, while the child doesn't grasp it because she doesn't clearly perceive it, and similarly for the rest of the cases.

But why couldn't the child and students acquire a grasp of the relevant information on the basis of testimony? The reason is that grasping involves clear perception, and clear perception is an epistemically basic mental state. However, the acquisition of an epistemic state through testimony

requires that this epistemic state be epistemically non-basic. Let me lay out the argument in full and then proceed to motivate it:

(1) Grasping involves clarity

(2) Clarity is an epistemically basic mental state

(3) For any epistemic state φ, if φ can be acquired through testimony, then φ must be epistemically non-basic

(4) Clarity cannot be acquired through testimony (from 2,3)

(C) Hence, grasping cannot be acquired through testimony (from 1,4)

Let us examine and motivate each premise in turn.

Premise (1) just stipulates the clarity account of grasping. It says that grasping is a distinct kind of conscious mental state, clear perception, that is characterized by its phenomenal character.

(2) Clarity is an epistemically basic mental state.

If a mental state is epistemically basic, then it does not epistemically depend on any other mental (or epistemic) state. One way to make this clear is to contrast an epistemically basic mental state with a mental state that is not.

Suppose I look outside the window and see that it is raining. I then form the belief that is raining. Here we have two mental states: a perceptual experience (seeing that it is raining) and a perceptual belief (believing that it is raining). On the one hand, the perceptual belief depends on the perceptual experience. I believe that it is raining *because* I see that it is raining. In particular, the

perceptual belief *epistemically* depends on the perceptual experience. For instance, my belief is justified because it is based on my perceptual experience (i.e. in virtue of some justification-conferring property of perceptual experience).[53] Thus, perceptual beliefs are not epistemically basic states. They can epistemically depend on other mental states–e.g. perceptual experience–as when, for instance, they depend on them for justification.

On the other hand, perceptual experiences are epistemically basic in a way that contrasts with perceptual beliefs. In particular, they do not depend on any other mental state. One way to highlight this is to notice that they are not formed on the basis of any other mental state. One either has or fails to have a perceptual experience. Now, of course, many things contribute to having a perceptual experience. I can close my eyes now and consciously decide to open them thereby having a perceptual experience. But the act of opening my eyes isn't relevant in any interesting epistemic sense to my having the experience. The epistemic character or properties, and hence status, of the mental state is independent of anything else.[54] With perceptual experience, we cannot pass the epistemic buck any further.[55]

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[53] Even if turns out that these experiences confer justification in virtue of something other than their phenomenal character (i.e. the phenomenal properties they instantiate), e.g. in virtue of their reliability, it is still open to maintain that the experience is epistemically irreducible to anything else, it is epistemically basic.

[54] I am aware that other views that take perceptual experience to be sometimes epistemically based on, for instance, beliefs, desires and biases (e.g. Siegel 2017). Other views take action to be epistemically prior to perception (e.g. Noë 2004), thus rendering them epistemically non-basic. Though I cannot hope to make justice to these views here, the distinction in the next in-text paragraph between causal and epistemic dependency might be useful to highlight that these views may only succeed in highlighting causal but not epistemic dependency. But an argument to that extent is beyond the scope of this paper.

[55] Another way to notice the difference is the following. Suppose you ask me why I believe it is raining and I tell you because I saw that it is. Natural enough. However, suppose you ask me why I saw that it is raining. The most natural answer would be "because I just did". This would be a natural response if you are inquiring about the epistemic basis of my experience. If, however, you were inquiring about the causal basis of me experience, then I can give you a story about light rays and retinal cells. But that story wouldn't explain the epistemic basis of the experience (nor would it convey anything informative about its phenomenal properties).

Before proceeding any further, it is important to distinguish two kinds of dependencies that a mental state can be involved in. In particular, mental states can be dependent on X in at least two ways, epistemic and causal.[56] I have already highlighted ways in which a mental state can epistemically depend on X.[57] When it comes to causal dependence, a mental state causally depends on X when X figures in a causal explanation of how the mental state was brought about. For example, my visual experience that it is raining outside was caused by light waves refracting on my lens and stimulating my retinal cells. Hence, my visual experience is causally dependent on the stimulation of my retinal cells. Now, a mental state can be causally dependent while at the same time be epistemically basic. Thus, my visual experience is caused by the stimulation of my retinal cells, but at the same time my visual experience is not epistemically based on such a cause. (This distinction will be important when evaluating the next premise.)

A mental state is epistemically basic if and only if we cannot pass the epistemic buck any further: The mental state is not epistemically based or dependent on any other mental state. And this is compatible with the mental state having causal precursors.[58]

Now we have in view what it is for a mental state to be epistemically basic. But why think that clarity in particular is an epistemically basic mental state? One way to see this is that clear intellectual perception, very much like visual perception, is a basic awareness of the subject-matter of one's mental

[56] Thanks to Eddie Cai for pushing me to stress this distinction.
[57] That is, by depending on it for its epistemic character, status, or justification.
[58] I do not here purport to have analysed or explicated the nature of the elusive epistemic basing relation, nor is it my intention to do so. My intention is just to give a rough and general description, primarily by reflecting on examples, of such a relation. This general description suffices, I think, for the purposes of the argument advanced in the text.

state.[59] It is a basic awareness in the sense that it is not consciously formed by the subject nor does it does not depend on any further mental state. To put it differently, clarity is a state that one happens to be in, not an action that one performs.[60]

Since clarity is a phenomenal state, the epistemic baselessness of clarity can be further brought out by reflecting on examples of other epistemically basic phenomenal states. Consider the phenomenal state of pain. The state of being in pain, that is the subjectively felt experience of pain, is not epistemically based on anything else. Suppose you step on a nail and you feel pain. If I ask you to describe the pain you are feeling, you are not going to tell me that your toe neurons are firing above a certain action potential threshold. Instead, in order to give me a description of the pain, you might point at instances of that feeling in one's experience: "It's the same feeling you get when I step on your toes, or the feeling you have when you bump your toes into a corner". The only way to convey what pain is like is to point at instances of it. This gives us reason to think that the phenomenal state of pain is not based on anything else, it is epistemically basic.[61]

A similar idea applies to clarity. The mental state of clarity, that is the subjectively felt experience of being presented with p and cognitively seizing upon p, is not epistemically based on anything else. In offering a definition of what it is to have a clear perception, we can only convey it through examples. In fact, this is what I have tried to do in the last section. I drew your attention to

[59] I leave it open as to whether that is the content of one's mental state or something out there in the world (facts, states of affairs, properties etc.)

[60] Contrast perceptual experience with perceptual judgments. While the former is a state are in i.e. that happens to us, the latter is an action that we do (more precisely, beliefs are states that results from the mental act of judging something to be true). This corresponds with (though doesn't explain of course) the idea that the former is epistemically basic while the latter isn't.

[61] The qualifier 'epistemically' here is important for the same reasons mentioned above. More specifically, pain may be causally reducible to (or supervene on) a physical state. But the phenomenological character of pain is independent of that.

examples of being presented with something and tried to put you in a position to subjectively feel what is it like. The reason for this is because clear perception is not epistemically based on anything else. They are, one might say, a given.[62]

To put the idea voiced here differently, clarity, much like perceptual experience, is a pre-doxastic awareness of some subject matter. This key feature of clarity structures the relationship between grasping and testimony.

> **(3) For any epistemic state φ, if φ can be acquired through testimony, then φ must be epistemically non-basic.**

This premise just rehearses the point made in Section 2. To briefly summarize, when we talk about an epistemic state being acquired or transmitted through testimony, we mean that the epistemic state is epistemically based on, and not merely caused by, the relevant piece of testimony.

Now, for any mental state, the epistemic basing relation required by testimonial acquisition is only possible if the mental state in question is of the sort that can allow such basing relation. In other words, an epistemic state can be acquired through testimony only if it can be epistemically based on testimony. To that extent, that state must be epistemically non-basic. Belief, as we have seen, is such a mental state. For instance, it can be based on visual perception. Similarly, belief can be based on testimony, like my belief that is raining in Alexandria, which I acquired on the basis of my friend's testimony. As such, it is possible for belief to be based on other mental states. And insofar as belief can

[62] Hence the title of Bengson's (2015b) excellent paper on intuition and presentational states to which this discussion is indebted: "The intellectual given".

allow for such an epistemic basing relation, belief satisfies a necessary condition for its acquisition through testimony.

In contrast, this epistemic basing relation is not possible for clear perception.[63] From this we get premise (4):

(4) Clarity cannot be acquired through testimony (from 1,3)

To the extent that clarity is epistemically basic, then it follows that clarity cannot allow for the epistemic basing relation required by testimonial transmission. Clarity cannot be epistemically based on testimony. Thus, clarity cannot be acquired through testimony.

Still, this is compatible with the claim that testimony can be causally relevant to one having a clear perception. However, we must once again stress that what matters for our question is whether clear perception can be *epistemically* based on testimony. It is in this strict epistemic basing sense that clear perception cannot be transmitted or acquired through testimony.

If grasping involves clarity and clarity cannot be acquired through testimony, then:

(C) Grasping cannot be acquired through testimony (from 1,4)

One might object that my argument rests on the claim the grasping cannot be transmitted through testimony because it involves clarity, but the same point applies to any perception, whether obscure or clear. Therefore, the fact that perceptions are sometimes clear when one grasps is not sufficient to motivate the claim that grasping cannot be transmitted through testimony. In reply, I should note that

[63] Recall Zagzebski's claim cited earlier that understanding cannot be conveyed in the same way beliefs can. My account provides an explanation for this thought.

it is not because grasping involves clear perceptions *as opposed to obscure perception* that grasping cannot be acquired through testimony. Indeed, if obscure perception is epistemically basic, then obscure perception cannot be transmitted either. Instead, my point is that because grasping involves an epistemically basic phenomenal state, grasping cannot be transmitted through testimony. Put differently, it is because grasping is epistemically basic, not that its specific phenomenology involves clarity, that grasping cannot be transmitted through testimony.

An additional objection might charge that presentational phenomenology is epistemically reducible into more basic terms. One might cite the case of Chudnoff's (2013, 37) analysis of presentational phenomenology into two kinds of seemings. According to him, an experience has presentational phenomenology just in case the experience makes it seem to you that p and makes it seem to you that are aware of a truth maker for p. Hence, presentational states, are not always epistemically basic. Given this, we have reason to doubt the claim that clarity, a presentational state, is an epistemically basic state.

In reply, it is instructive to look closer into this suggested analysis of presentational phenomenology. Upon closer inspection, we will find that the phenomenal quality of presentationality is explained in terms of another phenomenal state: a seeming. In attempting to analyze phenomenal qualities, you will eventually hit an epistemic rock bottom at another phenomenal quality. Thus, even if presentationality happens to be a complex or compound phenomenal quality, its constituents will nonetheless be epistemically basic.

Lastly, one might object that the conception of epistemic dependence implied by premise 3 is too strict. After all, in order to account for many instances of testimony-based knowledge, one needn't

a conception of testimonial transmission that requires full epistemic dependence on testimony.[64] For example, in many instances of testimonial interactions, the epistemic states we acquire are a mix of epistemically depending on others and the exercise of our cognitive abilities (recall the discussion in 5.1.). In other words, it is sufficient for an epistemic state to be acquired through testimony that the epistemic dependence involved be partial.

However, the nature of clarity precludes even this partial epistemic dependence. Consider the analogue of sensory perception. What does it mean for my experience of the rain outside to be partially epistemically dependent on my friend's report? One is hard pressed to flesh this out in a plausible way. The experience itself, as well as its epistemic character, is epistemically independent of my friend's report. Epistemically speaking, there is not much sense in saying that my friend can 'hand over', even if partially, her perceptual experience. She can convey what it is like to her to perceive that p by, for example, pointing me to the direction of p, but in no sense is my experience epistemically based at all on her report. In other words, conscious episodes like these are epistemically independent. The same point applies to clarity. Though you might try to convey to me your clear perception of p, you cannot transmit it to me. Similarly, my clear perception of p cannot be based on your report that p. The qualitative shift that happens to my perception of p, i.e. in virtue of enjoying a clear perception, is epistemically independent of your testimony. Thus, a weaker conception of testimonial transmission will not undermine the claim that clarity cannot be acquired through testimony, even partially.

[64] Malfatti considers this interesting point in (2020, 69). See Greco (2016) for a discussion along these lines.

Hence, I think we have good reason to accept the conclusion that grasping cannot be acquired or transmitted through testimony. Now since understanding involves grasping, and the grasping component of understanding cannot be transmitted through testimony, then we can understand why understanding is highly resistant to testimonial transmission. Understanding cannot be transmitted through testimony because it requires *clarity*.

3.7. Conclusion

In conclusion, clarity cannot be transmitted through testimony, because like perceptual experience, clarity is pre-doxastic, epistemically basic conscious experience, and such experience cannot be 'handed over' from speaker to hearer through testimonial interaction.[65]

[65] The clarity account of grasping accommodates some of the core insights of the cognitive achievement account of understanding precisely because the epistemic credit in clear perception is primarily creditable to the agent's firsthand experience.

Conclusion

The Significance of Clarity

As Michael Strevens notes:

> The sort of grasping needed for understanding requires a more intimate acquaintance …. [a] fundamental relation between mind and world, in virtue of which the mind has whatever familiarity it does with the way the world is. (Strevens 2013, 511)

Clarity puts us in position to be cognitively familiar with the world in such an intimate way. That is, it puts in a direct cognitive relation to a portion of reality, whereby it illuminates it.

The clarity account of grasping entails some important cognitive and epistemic roles that phenomenal consciousness plays in understanding and coming to understand. One possesses a grasp on the world through clarity. Moreover, clarity underwrites and structures our cognitive control with respect to what we understand. Lastly, clarity cannot be handed over from speaker to hearer in the same way that knowledge can.

Clarity is an epistemic ideal. Someone who possesses clarity, thus having deeper insight into the world, is in some significant sense praiseworthy. In fact, one might think that clarity underwrites wisdom too. A wise person perceives the important matters of life clearly. While systematic and comprehensive clarity is perhaps unattainable for beings like us, it is certainly an ideal to aspire to.

The possessor of clarity one might say, as Plato describes the possessor of *episteme*, is in that respect "honourable and excellent."[66]

[66] Quoted in Bengson (2017, 19).

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