

# UNDERSTANDING AND ATTENDING TO WHAT MATTERS

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**ABSTRACT:** We do not just want to know the truth. We also want to make sense of things, such that we understand. In this paper, I argue that understanding is distinctively valuable because it involves attending to what matters; more specifically, we cannot improve understanding by obscuring what matters. Section 1 introduces some cases that suggest understanding involves attending to what is important, in particular by representing the world in a way that brings what matters to the forefront of the mind. Section 2 explores three ways that a representation can bring what matters to the forefront: (i) selective emphasis (ii) vividness and (iii) resonating with an agent's concerns. Section 3 argues that we should take an objective interpretation of what matters, such that one's degree of understanding is sensitive to what *is* important and not what one finds important. Section 4 clarifies the sense in which understanding has distinctive and, in some contexts, superior epistemic value in virtue of attentiveness to what objectively matters. Section 5 addresses three objections that attempt to explain the value of attending to what matters in terms of knowledge or non-epistemic value.

**KEYWORDS:** understanding, grasping, attention

## 0. Introduction

Knowledge cannot seem to account for all that we care about in our epistemic lives. We do not just want to know the truth about reality, we also want to make sense of reality. We want to *understand*. Some criticise the tendency for epistemology to focus on knowledge, arguing that we should also take interest in the value of understanding as a distinct epistemic state (Elgin 2017; Kvanvig 2003). However, there is much disagreement about how understanding comes apart from knowledge and what this means for its value. The central aim of this paper is to argue that understanding has distinctive epistemic value because the understanding agent attends to what objectively matters.

Section 1 discusses some cases in which understanding involves attending to what is important; in these cases, the agent improves their understanding by representing the world in a way that brings what is important to the forefront of the mind. Section 2 unpacks this idea by exploring three potential ways in which a representation of the world brings what matters to the forefront: (i) selectively emphasising some features of the world at the cost of others, (ii) vividly representing

the world and (iii) representing the world in a way that resonates with the agent's concerns. Section 3 argues for an objective interpretation of my claims about understanding, according to which one's degree of understanding is sensitive to what *is* important and not what one finds important. I argue that one cannot improve understanding by obscuring what is objectively important. Section 4 clarifies the sense in which understanding has distinctive and, in some contexts, superior epistemic value in virtue of attentiveness to what objectively matters. Section 5 addresses three objections.

## 1. Grasping and What Matters

Understanding has been distinguished from knowledge in numerous ways.<sup>1</sup> Some think understanding has a different relationship to truth (Kvanvig 2003; Elgin 2017). Some think understanding is immune to epistemic luck (Hills 2016; Kvanvig 2003, 198). The subject of this paper is the idea that understanding goes *beyond* knowledge because it involves something along the lines of grasping, apprehending or making sense of the world (Grimm 2006, 532; Kvanvig 2009, 99; Strevens 2013, 511). There is much discussion about the phenomenon of 'grasping' in understanding and I do not aim to develop a full account of grasping here.<sup>2</sup> I will, however, argue that the grasp at issue in understanding involves attending to what objectively matters and this is one respect in which understanding is distinctively valuable.

To see the connection between grasping and attending to what matters, consider the following cases:

*Comparisons and Examples.* S finds comparisons and examples helpful to their grasp of scientific topics. S initially finds it difficult to grasp accumulation of CO<sub>2</sub>, in part due to difficulty grasping stock and flow dynamics. Although S believes that the stock of CO<sub>2</sub> in the atmosphere will accumulate the flow of CO<sub>2</sub> emissions minus the flow of CO<sub>2</sub> from the atmosphere, they have a hard time relating the

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<sup>1</sup> There are many varieties of understanding, including objectual understanding (Elgin 2017; Kvanvig 2003), explanatory understanding (Grimm 2014; Hills 2016) and practical understanding (Bengson 2017). It seems that each variety of understanding involves attending to what matters, and so I do not put too much emphasis on these distinctions, although it could be that attending to what matters manifests differently in each variety.

<sup>2</sup> Stephen R. Grimm (2014) argues that grasp is to do with apprehending modal relationships. Alison Hills (2016) argues that grasping refers to a set of cognitive abilities relevant to one's command over the relationship between propositions. Michael Strevens (2024) argues that grasping a property is being able to recognise its instances. David Bourget (2017) argues that we can think of grasping in terms of phenomenological consciousness. John Bengson (2015) argues that, where there is a change in understanding, there is a change in the way we conceive of the world.

flows to the level of the stock and taking into account the network of stocks and flows. S improves their grasp after consulting a diagram of a bathtub with a tap and drain that depicts a network of relevant stocks and flows.<sup>3</sup> S also knows that the Sun is around 1,300,000 times the volume of the Earth, but they improve their grasp with a comparison to the relative size of a basketball and an apple seed.<sup>4</sup>

*Experiences:* ‘Annie is a kind woman who loves animals and would never want to hurt them...One day, she visits a bovine slaughterhouse, where she sees cows suffering and being slaughtered. The visit does not teach Annie any new general facts about meat-eating since she was already very knowledgeable about the slaughtering process prior to the visit. However, seeing the animals suffering and being slaughtered makes the implications of meat-eating alive to her. Grasping the implications of meat-eating for the first time, Annie finds herself unable to ignore them in her decision making and resolves to become vegetarian’ (Bourget 2025, 100).

*Words and Concepts:* S knows a lot about extinction events. S improves their grasp of extinction by adopting the term ‘endling’ to refer to the last living member of a species. This term evokes a great sense of loneliness and loss and this helps S organise their thinking on the subject.

What is interesting about these cases is that the agent appears to achieve a grasp of the world that goes beyond knowledge and this does not centrally involve getting closer to the truth *as such*. The agent may gain relevant true belief and knowledge but knowing the truth does not capture what improves about their epistemic situation. What changes is that they represent the world in a way that makes sense to them and, in particular, helps them grasp something significant about whatever it is they understand.

To make this point clear, here is a brief note on mental representation. To stand in some epistemic relation to a part of the world X, we need to represent X in our minds. I will not provide an account of mental representation but some examples include the content of thoughts, beliefs, and acceptances that pertain to X. It’s plausible that mental representations of X need not be conscious or even potentially accessible to the conscious mind, e.g. implicit beliefs and biases seem to involve representing the world a certain way in our minds but may be inaccessible to us. The sort of mental representations that figure in epistemic successes, such as knowledge and understanding, are evaluated according to whether they *fit* the world. This

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<sup>3</sup> Discussion of how diagrams of bathtubs can aid grasp of stock and flow dynamics can be found in Serman (2011).

<sup>4</sup> The case of the relative size of the Earth and the Sun is from Bourget’s (2017, 310) paper on grasping, in which the role of small scale models is explained in terms of the agent’s visualisation of relative size. I will return to this idea later.

contrasts with mental representations that may reference a part of the world but do not fit that part of the world, such as the content of desires and imaginings. The mental representation that features in knowledge, i.e. belief content, is evaluated according to whether it fits the world by being true. In the above cases, the mental representations that feature in understandings are not just evaluated in terms of whether they are true because sometimes truth is not enough.

Some true representations can bring about or feature in understanding, where others may not, because they bring something important to the forefront of one's mind in a way that believing just *any* truth does not. It is not just any truth that will improve S's understanding of complex scientific topics, it must be truths that employ good examples or illuminating comparisons. It is not just any true belief that will help Annie recognise the moral significance of animal suffering. She must call to mind a vivid representation of this suffering from her direct experiences. It is not just any true belief that helps S understand extinction events, they must make use of specific words and concepts that help to organise their thinking on the subject.

I propose that this difference between knowledge and understanding is explained by the fact that understanding involves attending to what matters. Consider Jonathan Kvanvig's remarks on the relationship between understanding and what is important:

Whereas knowledge can be piecemeal, understanding requires more completeness. Thus, it is not possible to miss something important about which one has perfect understanding. Moreover, the concept of relative understanding tracks what is important in a body of information, so that failure to grasp significant items within that body of information renders a person lacking in understanding. It is only when information is less important within that body of information that one can be credited with understanding in spite of such a failure of perfect understanding (Kvanvig 2003, 203).

We should take care to distinguish two claims here. The first is that, because understanding is comprehensive, we cannot miss what is important about whatever we understand if we have perfect understanding. The second is that, when something significant is missing from an agent's grasp, this renders them lacking in understanding. The first claim is about comprehensiveness: perfect understanding must reach all the important aspects of whatever one understands. The second claim is that understanding attributions are more sensitive to what is important than what is unimportant.

These claims suggest that understanding puts one in contact with whatever is important about what one understands. This idea is further complicated when we consider that whether an agent 'misses' a piece of information is not just a matter of inclusion, i.e. failing to have true beliefs about the things that matter. It is also about

emphasis and attention. In the above cases, the agent understands because they can no longer readily overlook or ignore what is important. To understand, they must engage with representations of the world that bring what is important to the forefront of their minds in the right way.<sup>5</sup> In this paper, I argue that understanding has distinctive epistemic value because understanding involves attending to what is objectively important. In preparation to make this argument, the next section discusses some ways that a representation of the world may bring what is important to the forefront of the mind.

## 2. Bringing What Is Important to the Forefront

So far, the notion of bringing what is important to the forefront is unclear and the cases in Section 1 suggest some variety in how this is achieved. I argue that understanding involves engaging with representations of the world that guide attention towards what matters. To really attend to what matters, it is not enough just to recognise *that* something matters in the limited sense that whatever matters jumps out as important in some undefined way. It is also crucial to recognise *how* something matters. The idea is that, when an agent attends to what matters, they also see how it matters and, as such, they give due weight to what matters.

What I have in mind here is closest to Elisabeth Camp's (2019b) work on perspectives and characterisations. For Camp, *characterisations* are sets of beliefs about some object that, in contrast to concepts, are often implicit and guide our intuitive thinking. Characterisations are produced from a certain perspective, where a perspective determines what an agent '*notices* and *remembers* about the subject; they guide how the agent assimilates and explains that information within the context of her other assumptions; and guide how an agent evaluates and *responds* to it' (Camp 2019a, 307-308). Our mental representations of the world can guide our attention, and influence our reasoning, by affording salience to things that matter and situating them in a network of relationships that determine how they matter. The relevant sense of attentiveness can include a conscious sort of focus on what matters but can also include prominence in our intuitive thinking that affects what we are disposed to think about, notice and remember. In this section, I discuss three potential ways that a representation of the world brings what matters to the forefront in a way that guides attention.

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<sup>5</sup> As I will discuss in more depth, others also highlight the role of attention in understanding, such as Catherine Elgin (2017) and Elisabeth Camp (2019).

## 2.1 Selectively Emphasising

Some representations of the world guide our attention by selectively emphasising important features of the world at the cost of others. In other words, some features are brought to the forefront of the mind by in some way marginalising others.<sup>6</sup>

Consider Camp's discussion of frames. Framing devices not only state the facts but are also suggestive of intuitive ways of thinking and, as Camp (2019b, 17) points out, we often use frames to communicate ideas. Metaphors, e.g. my new home is a dump, are framing devices that exploit comparison of one thing to another to bring properties, images and feelings to the forefront of our minds.<sup>7</sup> Other examples include slogans, diagrams, caricaturing cartoons or drawing attention to especially telling details, which each work in a similar way (Camp 2019a). On Camp's view, frames express a perspective on the world in the sense that they express what matters and how. A feature can be *prominent* or it can be *central*, where the former concerns which features matter and the latter concerns how they matter. For Camp, whether a feature is prominent depends on whether it is diagnostic (in that it aids the categorisation of objects) or intense (to the degree that it instantiates a high 'signal to noise' ratio and is therefore emphasised over other features) (Camp 2019b, 20). Whether a feature is central concerns its connectedness to other features, such connections may be, for example, moral or causal. A frame expresses whether and how a feature matters by drawing attention to that feature and situating that feature in a network of these connections. Frames, therefore, represent the world in a way that raises some features to prominence over others, and encourages attentiveness to what matters and how.

Catherine Elgin (2007, 2017) discusses selective emphasis in understanding, arguing that some representations selectively guide attention to some features at the cost of others by deviating significantly from the truth, e.g. idealisations, thought experiments, stylised facts and abstractions. In *True Enough* (2017, 16), Elgin argues that, because scientific understanding falsely represents the world in this way, veritist epistemologies that centre truth cannot explain the epistemic success of science. In this paper, I am neutral on the question of whether understanding is non-factive and focus instead on Elgin's notion of exemplification.

Exemplification is the relationship between an example and what it is an example of. A feature is exemplified in virtue of being instantiated and emphasised, e.g. a sample card can exemplify a particular colour by instantiating that colour and downplaying its other properties such as being rectangle or made of paper (Elgin

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<sup>6</sup> See Elgin (2017, 183-203).

<sup>7</sup> Example from Camp (2019b, 17).

2017, 187-188). Selective emphasis provides epistemic access to a particular feature of the world, in this case a shade of yellow, and enables the understanding agent to recognise that feature in a variety of contexts.

An example provides this epistemic access by selectively emphasising a feature at the cost of others (Elgin 2017, 184). To explain this, Elgin also refers to the notion of ‘signal to noise’, as ‘a matter of distilling meaningful information out of the total available information on a topic’ (Elgin 2017, 193). What is signal in one context is noise in another; the most overbearing feature of a manufacturing process may be the loud sound it makes but, in the context of a safety inspection, it might be some otherwise unnoticeable vulnerability or risk (Elgin 2017, 187). We might need some amount of ‘stage setting’ to successfully interpret an exemplar. Elgin writes that, when making an example of something ‘the critical question is what features of the item we want to be in a position to focus on’ (2017, 194). By making an example of something, one sets the stage to direct attention towards some things and away from others.

There is much more to say about selective emphasis but what I hope to have established is that representations of the world, e.g. in framing and making an example of something, can guide attention by prioritising some features at the cost of others. This partially explains what is going on in *Comparisons and Examples* and *Words and Concepts*. In *Comparisons and Examples*, the relevant stock and flow dynamics are emphasised by the comparison with a bathtub, where the same dynamics are instantiated in a familiar setting and complicating factors are excluded. Because this feature of the world is now easier to recognise, S can now see how stock and flow dynamics operate in the context of accumulating CO<sub>2</sub>. In *Words and Concepts*, the loneliness of extinction is emphasised by the term ‘ending’ at the cost of other features. When using this term, S attends to this feature of the world over others and organises her thinking through the lens of this loneliness.

## 2.2 Vividly Representing

It seems that it is not just selective emphasis that brings what matters to the forefront of our minds but also vividness. David Bourget (2025, 2017) argues that grasping concerns changes in phenomenal consciousness or the ‘what it’s like’ element of our mental states that the agent experiences, such as colour, emotional feeling, conscious thoughts and imagery. The idea is that Annie, for example, grasps because she has a phenomenal experience she did not previously have. Bourget also thinks phenomenal consciousness is relevant in *Comparisons and Examples*, where the agent can grasp the size of the Sun compared to the Earth by experiencing the relative size of a basketball and an apple seed. It’s not clear to me how one would

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make sense of *Words and Concepts* on this view. However, even if we cannot fully explain grasp in terms of phenomenal consciousness, I contend that experiences are relevant to understanding because of how they impact our attention.

Representations like statistics and verbal descriptions do not have the same hold on our attention as vivid representations. We cannot easily overlook or ignore something that is vividly represented and, moreover, vivid representations stick in our minds. Kathie Jenni describes how we respond when we become aware of a moral problem that we are not directly confronted with regularly, such as suffering in animal agriculture. Initially, we respond with an urgent need to respond to the issue but as time passes, this feeling fades ‘we lose our focus; our attention is diverted; we forget’ (Jenni 2003, 281). Jenni argues that, where possible, we ought to confront visual evidence of suffering and injustice so that we maintain a clear and vivid sense of them:

[T]he visual often moves us to moral responses when statistics and words do not, and our knowledge of human psychology should play a part in our “handling” of ourselves for moral ends. We should, moreover, occasionally activate our imaginations and memories to remind ourselves of moral horrors, if this is necessary to revitalising our commitment to address them (Jenni 2003, 289).

The vividness of how we represent the world affects whether we continue to sustain our attention on what matters in a way that honours how it matters. So, vividness also brings what matters to the forefront because, by engaging with these representations, we become less vulnerable to ignore or forget what matters.

### 2.3 Resonating

Sometimes a representation brings what matters to the forefront by forming a personal connection with the understanding agent. The representation *resonates* in some way. When a representation resonates, it may feature in understanding for some agents and fail to produce understanding in others. It is not obvious that this can be fully explicated in terms of selective emphasis or vividness.

In some cases, whether a representation resonates with an agent is just a matter of how well-equipped an agent is to interpret selective emphasis or recall relevant experiences. Some may improve their grasp of plastic pollution after hearing that the Great Pacific Garbage Patch is around twice the size of Texas. Notice that this comparison only helps those who are already familiar with the geography of the United States of America, and who are therefore well-equipped to interpret what is signal and what is noise in this comparison or to refer to their previous experiences and visualise this relative size. Others might achieve grasp by comparing the Great Pacific Garbage Patch to three times the size of France instead. However, it’s not

clear this is all there is to the role of resonating, especially in cases where a representation resonates by evoking emotions and connecting with an agent's deeper concerns.

An agent's concerns, and their emotional responses, are relevant to the cases in Section 1. When Annie goes to the slaughterhouse or S uses the term 'endling', it is partially the emotional impact that improves understanding. It is tempting to explain this as entirely non-epistemic, especially given that the role of emotion in our epistemic lives can often be negative, e.g. the role of emotion in wishful thinking. Contrary to this idea, what we care about can influence our epistemic situation in a positive way by guiding attention. Consider Nomy Arpaly's (2011, 77) example to demonstrate that we are more likely to notice what we care about: a person who loves owls is more likely to notice that the word 'owl' is embedded in the word 'knowledge'. At least one of the ways that our emotions have a positive influence on our epistemic lives, then, is that by caring about what matters, we are more likely to attend to what matters. Certain representations of the world resonate because they are effective at encouraging this positive role of emotion.

A representation of the world can activate the positive role of emotion in guiding our attention. Provided that we are like Annie, and some of our deeper concerns are already in the right place, a representation of the world can illuminate the relationship between a feature of the world and what we already care about in a way that brings about certain emotions. In Annie's case, direct experiences resonate by illuminating a connection between what happens in the slaughterhouse and her existing moral concerns; the idea is that Annie's attentiveness to what matters is strengthened specifically because she represents the world in way that forms this personal connection and evokes emotions that guide her attention accordingly. Perhaps this ultimately reduces to selectively emphasising or vividly representing this connection. In any case, we should recognise the personal aspect of the cases I discuss: the efficacy of a representation in our understanding in part depends on how it relates to an agent's prior concerns. This is crucial because, for this reason, the same representations of the world may successfully bring about understanding for some agents and not others.

To conclude, the way that we represent the world matters differently to understanding because understanding involves attentiveness to what is important. We improve our understanding by representing the world in a way that brings what matters to the forefront of our minds, in some or all the ways I have discussed. In the next section, I argue that we should interpret what counts as important objectively.

### 3. What Counts as Important

There are features of the world that matter to me and some features of the world that don't matter to me. When a feature of the world matters, I get the world right in some way by finding this feature of the world important. There is a distinction, then, between (i) what is important for an agent and (ii) what the agent finds important. If we interpret what counts as important in the former sense, then understanding tracks what objectively matters, whereas if we interpret what counts as important in the latter sense then understanding tracks whatever subjectively matters. I argue that understanding involves attending to what is objectively important and that something can be important in different senses, e.g. because it is morally relevant, practically relevant or interesting for its own sake.

In the context of my claims about understanding, we should interpret what matters in the objective sense. Understanding is an epistemic *success*. It is supposed to be a way of getting the world right. We should be immediately suspicious of the idea that we can characterise this epistemic success in terms of mistake. Recall Kvanvig's (2003, 203) second claim that failing to recognise what is important renders a person lacking in understanding. In a case where an agent fails to appreciate that climate change is anthropogenic, we are inclined to say that they don't understand climate change, or at least that this bears more heavily on their degree of understanding than a less morally or practically relevant fact. However, the subjective interpretation says that this only applies if the agent finds the anthropogenic nature of climate change to be morally and practically important. This is a counterintuitive result. Even worse, the subjective interpretation says understanding can improve not just in spite of a mistake like this, but that degree of understanding is actually *characterised* by the nature of this mistake. It's conceivable that we can be completely wrong about what is, for example, morally relevant. If understanding is to do with attending to what is subjectively important, those who are catastrophically wrong about morality may still improve understanding by attending to whatever they take to be morally important. This seems like a clear instance of misunderstanding.

It is important to note, however, that just because something is objectively important, does not mean it cannot be agent relative. Notice that practical reasons can be objectively important and yet relative to the agent and this means what *practically* matters and how will depend on the agent and their circumstances. For example, the fact that I have free time this evening is practically relevant in that it presents a reason for me to practice piano. That this fact matters and how it matters depends on my aim to be a good pianist, but this does not reduce to what I find important. Perhaps I am mistaken in thinking that all it takes to be a good pianist is

simply to convince myself that I am. This does not turn the fact I have free time this evening into a practical reason for me to tell myself I am a good pianist instead of practicing piano. Similarly, moral reasons can be construed as objective but are nevertheless relative to the agent. The fact that someone is in pain matters morally in that it presents a moral reason for a doctor to perform certain medical interventions but this fact does not present the same reason for agents without relevant expertise. In other words, how this fact matters morally is relative to the agent in question, yet continues to be an objective matter do with moral obligations and the expertise of the agent, rather than what the agent finds morally important.

One might worry at this point that degree of understanding need not concern what is practically or morally important in these ways and that understanding is not inherently action-guiding. We can have a high degree of understanding about something that has no clear relevance to our lives and, more to the point, there are some things about these subject matters that are more central or noteworthy than others. These facts will bear more heavily on our understanding, even though they are not practically or morally important. I suggest that, in such cases, importance concerns what is interesting in its own right.

### 3.1 What is Interesting?

In some cases, what is important is not to do with what is morally or practically relevant but instead involves what is interesting for its own sake. Some examples might include fundamental scientific laws, ancient history, how time works and how the universe began. Although these subjects, and particular facts about them, might carry some practical or moral implications, there is not always a direct relevance to our lives and, in any case, there are aspects of these subjects that are more important than others simply in virtue of being interesting.

At first glance, what is interesting can be subjectively interpreted as whatever the agent happens to find interesting. However, it is important to distinguish between what is interesting and what one finds interesting. It seems we can recognise that something is interesting and yet lack an interest in it. Conversely, we can have an interest in something that is not interesting; to take Ernest Sosa's (2003, 156) example, the question of how many grains of sand in a handful is trivial and a mere interest in this question does not make it interesting. It's unclear what exactly makes something objectively interesting independent of what we have an interest in. Grimm (2011) considers the idea that interestingness is an objective property to do with uncovering dependencies related what kind of things there are (or what are the 'joints of nature' or differences between things), how things work, how did things get to be this way and how we should live. However we make sense of

interestingness, there is a distinction between what one finds interesting and what actually is interesting and understanding tracks the latter.

While interestingness is objective, it can also be agent relative, in a similar way that morally or practically relevant facts can be. A student may achieve understanding via a representation of the world that highlights some striking or unusual answer to a question that is no longer interesting to the expert scientist. This is related to what Grimm (2011, 538) refers to as the ‘subjectivity of the unexpected’: bioluminescent fireflies are interesting in our world but, in a world of bioluminescent creatures, houseflies may be interesting.<sup>8</sup> Because we all have different prior experiences and background beliefs, something might be interesting and worthy of attention for some and not others. Despite the reference to subjectivity here, this would still fall within the realm of objective importance as it is understood in this paper; this is not a matter of what the scientist and the student happen to find interesting, but instead a matter of which features of the world contrast with their prior experience.

Finally, we should consider how it is possible to understand completely unimportant subjects, e.g. how many grains of sand in a handful. The right response here is to recognise that understanding is a gradable success with different dimensions. Attending to what matters is a contributing factor to one’s degree of understanding. Believing the truth appears to be another. Perhaps there are also other dimensions, to do with cognitive abilities associated with grasping. If this is right, we can still understand unimportant subjects and improve understanding by learning about unimportant things when we get closer to the truth and perhaps acquire some other aspects of grasp whatever they may be.

An interesting result, however, is that attending to what matters appears to take *priority* over these other considerations. What I mean by this is that attending to what matters always seems to improve understanding whereas believing more truth, for example, does not improve understanding when it interferes with attentiveness to what matters. For example, one will always improve their understanding of climate change when they gain knowledge or consider representations of the world that guide their attention to what matters. However, one might worsen understanding of climate change by focusing on comparatively less important facts, such as memorising very specific results, and ignoring the bigger picture or the most morally or practically relevant and interesting aspects. It’s possible to *worsen* understanding about a domain, with a focus on what is

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<sup>8</sup> Note that Grimm (2011) suggests that a promising (but not unproblematic) way to navigate the subjective and objective sense of interesting is to say that interestingness can only be an objective property of questions and topics.

comparatively less important in a way that *distracts* from what is important. This works in the opposite direction to guiding attention to what matters, by diverting the agent's attention away and producing a vulnerability to forget.<sup>9</sup> This presents a distinctive epistemic value of understanding.

#### 4. The Value of Understanding

We can now say this about how the value of understanding compares to the value of knowledge. When we gain more understanding, we cannot get further from what is important; if we arrive at more truth, and this interferes with our attentiveness to what matters, this is a detriment to understanding. For knowledge, there is no such guarantee. We can successfully know many unimportant things in a way that distracts us from what matters and this still contributes to our overall body of knowledge. At least one distinctive epistemic value of understanding is that it *protects* attentiveness to what matters. Moreover, understanding will be preferable to knowledge in contexts where attending to what matters is a priority. For example, understanding renders complex aspects of the world intelligible by bringing what is important to the forefront. When it comes to complex topics, understanding is always illuminating where knowledge can be counterproductive. In the complex world we live in, where our daily decisions depend upon complex information concerning health, climate change, economics etc., perhaps we frequently value understanding over knowledge. This explanation for the superior value of understanding departs from other proposals. Grimm (2012) distinguishes between three ways that understanding has been thought to be more valuable than knowledge: (i) transparency, (ii) achievement and (iii) mirroring structure. My explanation for why understanding is, at least in some contexts, preferable to knowledge departs from these other explanations.

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<sup>9</sup> This idea has a similar motivation to 'clutter avoidance norms', which say we should not clutter our minds with trivial things (Friedman 2018; Harman 1999). Note that Jane's Friedman's (2018, 570) discussion of these norms suggests that having an interest in some topic is sufficient for it to be in one's interest to have beliefs regarding that topic (therefore excluding these beliefs from being clutter). Despite this difference in what counts as clutter, the motivation for clutter avoidance is similar to what I have in mind here: we should not clutter our minds because this wastes time, energy and storage space that could be utilised to believe in things that matter. Friedman discusses one way in which trivial knowledge can detract from what matters, which is that when we try to recall something, related memories compete and new memories may interfere with our access to older ones.

#### 4.1 Transparency

Some argue that understanding is more valuable than knowledge because understanding is reflectively accessible. Linda Zagzebski (2001, 246) argues that understanding is *transparent*: when we understand, we always understand that we understand. Duncan Pritchard (2009, 39) suggests that when we understand we have some reflectively accessible grounds for our understanding. Jonathan Kvanvig (2003, 202) aligns understanding with internalist theories of justification, arguing that understanding requires an internal grasp of coherence relationships. *Prima facie*, there is some connection between understanding and reflection, given that understanding involves being able to ‘see’ or ‘appreciate’ how things relate to each other.

While it’s not plausible that we can tell upon reflection whether we are attending to what *objectively* matters, we might think that it’s accessible to us what we think is important and how we think it is important. Perhaps attending to what matters, such as in the cases of Section 1, is accompanied by a reflectively accessible ‘aha moment’, where we realise relationships that determine what is important and why. However, note that this is not the locus of value I am interested in; understanding is distinctively valuable because the understanding agent successfully attends to what actually matters. Insofar as this ‘aha moment’ is fallible, and we can experience the ‘aha moment’ when we wrongly think something matters, this feeling does not indicate genuine attentiveness to what matters. Moreover, it’s not obvious that the ‘aha moment’ is always present when we *do* attend to what matters. Recall that mental representations that guide attention can be unconscious and, if so, we can attend to what matters without having any corresponding awareness of this.

#### 4.2 Achievement

Some argue that, while knowing might be achieved passively, e.g. by relying on the testimony of others, understanding requires something more active (Pritchard 2024). In a case discussed by Duncan Pritchard (2010, 316), Kate the scientist can know what caused the chemical reaction by relying on a fellow scientist’s testimony but she might lack understanding without a grip on how the chemical reaction was brought about. Because understanding involves an agent’s effort to piece information together, rather than relying on someone else’s say-so, some think understanding is always *creditable* to the understanding agent. Pritchard (2024) argues that understanding is distinctively valuable because, unlike knowledge, it is always a *strong cognitive achievement*, i.e. an achievement that involves either (i) overcoming a significant obstacle or (ii) manifesting a high level of skill. At least one

of these conditions is met, argues Pritchard, because this process of piecing together either happens immediately due to the agent's high level of skill or involves overcoming significant obstacles, e.g. by engaging in reasoning; this would constitute a distinctive value of understanding because achievements are valuable for their own sake.

I agree that understanding is more active than knowledge. There is a difference between the agent who knows propositions about what matters and how and the agent who instantiates these relationships in their thinking. It is the latter agent who understands. Following Camp, while the content of our characterisations of the world can be expressed by propositions about higher-order relationships, concerning what matters and how, being in possession of a characterisation involves actually thinking intuitively such that 'prominent features really do jump to attention and central features really do connect in explanatory associations that one is actually disposed to draw' (Camp 2019b, 38-39). In order to understand, we must actively take up these relationships in our cognition such that we attend to what matters and how; we really do focus on what matters, we remember what matters, we notice what matters and what matters really is prominent in how we reason. Notice this is not the same as acting on what matters or otherwise responding to what matters. Annie can attend to what matters morally, such that she is in a good position to see what she ought to do, but due to other factors, e.g. lack of motivation, she still chooses not to be vegetarian. The point here is just that the agent really does pay attention to what matters, not just that they passively know the truth about what matters, and this is why understanding is more 'active' than knowledge.

Although I agree that understanding is more active than knowledge, it's non-obvious that this is always a matter of either a high level of skill or the overcoming of significant obstacles (of course, it remains possible that other elements of grasp do meet these conditions). In the cases I discuss, the agent attends to what matters by considering certain representations of the world. Once we appreciate this point, it becomes plausible that this attentiveness feature of understanding can be primarily attributed to others. In cases like *Examples and Comparisons*, S may achieve grasp by relying on science communications that include diagrams, examples and framing devices carefully considered and deliberately chosen with the aim to improve understanding. In a case like this, S attends to what matters in a way that is primarily creditable to the epistemic work of others who have testified based on their scientific expertise, correctly judged what matters for S, provided representations of the world that bring forward what matters and communicated them effectively. Moreover, S's understanding is most valuable because it renders the world intelligible, rather than because S achieves something by seeing connections for themselves. In sum, we can

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plausibly be *given* representations of the world that largely account for whether we attend to what is important and, in a case like this, this feature of understanding does not constitute a strong cognitive achievement and may be primarily creditable to others.

### 4.3 Mirroring Structure

Because understanding involves seeing how one thing is related to another, we might think understanding offers a deeper insight into the structure of the world. To illustrate this point, some refer to Lewis Carroll's (1895) story of the Tortoise and Achilles. In this story, the tortoise challenges Achilles to force him to believe the logical conclusion of an argument. Achilles asks the tortoise to believe further premises that reiterate the relationship between the premises and the conclusion that they logically entail. But the tortoise continues to refuse to believe the conclusion. Moreover, even if the tortoise were to believe the conclusion, he may still fail to base this belief on the premises; he may believe this conclusion for another reason entirely or for no reason at all (Stroud 1979). The lesson here is that what it means to see the relationships between propositions is not exhausted by belief in propositions that describe these relationships. To really see the connection between propositions, our beliefs must relate to one another in our minds in a way that mirrors the relationship between the propositions we believe. We might think that it is inherently more valuable to mirror the structure of the world than it is to mirror the world by believing the truth. Another basis for the superior value of understanding could be that, when we understand, we mirror the world twice: we mirror the world in content (by believing the truth) *and* in form (by seeing the connections between truths).<sup>10</sup>

In line with this view, I also think understanding is epistemically valuable because it is a distinctive way of getting the world right: to understand involves attending to what actually matters. We might think of this in terms of mirroring; the way we think mirrors what matters, by giving appropriate weight to what matters in how we think. My view also says that understanding provides a deeper insight into the structure of the world that knowledge may lack, i.e. the relationships that determine what matters and how. However, the distinctive epistemic value of attending to what matters is not *just* a matter of mirroring structure.

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<sup>10</sup> Hills argues that understanding is valuable because it mirrors the world in content, by involving true belief, and because it mirrors the world in form: when we grasp the world, dependencies between our beliefs mirror dependencies in the world. Hills (2016, 680) argues that understanding therefore mirrors the world twice but suggests that whether we prefer understanding or knowledge still depends on context.

Mirroring structure comes apart from attending to what matters. Because what matters is agent relative in the way I have outlined in Section 3, e.g. what matters morally depends on our abilities and expertise, the degree to which we attend to what matters is also agent relative. Understanding is therefore situated in the context of an agent and their circumstance. In contrast, the degree to which we mirror structure is not agent relative in this way; we can improve in how well our minds mirror the structure of the world, irrespective of whether we attend to what matters for us. We can also mirror unimportant relationships (such as the potentially infinite list of reiterative propositions in Carroll's story) in a way that distracts us from what is important, just as we can know things that distract us.

To conclude this Section, I have argued that understanding has distinctive epistemic value because improvements in understanding protect attentiveness to what matters, ensuring that we do not miss what is important. This explanation for why we might prefer understanding to knowledge departs significantly from other explanations in the literature.

## 5. Objections

In this section, I address the concern that everything 'epistemic' about what I have discussed can be explained in terms of knowledge-that. To be clear, I am not concerned with the idea that understanding is just another, perhaps non-propositional, species of knowledge (Grimm 2014). I am concerned with views that pose a threat to the claim that understanding has distinctive epistemic value, independent from propositional knowledge, in virtue of attending to what matters. I consider three objections: (i) this feature of understanding reduces to knowledge-that, (ii) is only valuable instrumentally to knowledge-that and (iii) its distinctive value is non-epistemic.

### 5.1 Reducible to Knowledge

The reductionist view about understanding says that understanding reduces to knowledge-that. Consider the much-discussed *Faulty Wiring* case, in which a parent and son both know that the house burned down due to faulty wiring but only the parent understands because only the parent grasps how the faulty wiring brought about the fire.<sup>11</sup> Paulina Sliwa argues that the asymmetry between the parent and son is fully explained by differences in relevant background knowledge and degrees

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<sup>11</sup> The example of understanding why the house burned down is originally from Brogaard (2005). This case is discussed by many others in the understanding literature (Elgin 2017; Grimm 2014; Pritchard 2008).

of understanding 'simply correspond to different amounts of knowledge' (2015, 71). More specifically, differences in background knowledge about fires determines the epistemic possibilities the parent and son can entertain and therefore their grasp of how faulty wiring might bring about the fire. The parent may continue to consider whether faulty wiring occurred due to a broken fuse or a frayed cable but the child is still unclear on what faulty wiring is and therefore continues to entertain many epistemic possibilities.

Sliwa may be right that every increase in understanding implies new knowledge; if the son knows why the house burned down, but does not understand why, there is something about the fire that they do not know (2015, 71). As we have seen, however, knowledge can be a detriment to understanding, just in case it distracts from what matters. In *Faulty Wiring*, not all parts of the causal story matter, e.g. that someone installed wiring or that the house was built in the first place. There is a contextually relevant cause of the fire, i.e. that the wiring was faulty, that matters in some or all of the ways I have discussed: it might be practically relevant (in avoiding fires), morally relevant (to keeping people safe) or interesting in its own right. Learning about other causal factors could be a detriment to understanding, just in case doing so diverts attention away from the contextually relevant cause. Degrees of understanding do not simply correspond to increases in knowledge because improvements in understanding are not just a matter of accumulating different *amounts* of knowledge—that.

One might respond here that we can still reduce understanding to knowledge, if we constrain the focus to knowledge about what matters. In other words, we can explain what is epistemically successful about degrees of understanding in terms of knowing true propositions about what matters and how. This is initially promising because what is important (in this case, the role of faulty wiring) and how it is important (in this case, its practical, moral or epistemic importance) can apparently be expressed by propositions. However, we must distinguish between the claim that: (i) the *content* of understanding can be expressed propositionally and (ii) the *epistemic state* of understanding can be reduced to propositional knowledge. While (i) may be true, (ii) is false.

The problem with (ii) is that knowing propositions about relevant relationships does not suffice for understanding. We have already seen from Camp's (2019b, 38–41) work that we can know propositions about what matters and how and yet fail to attend to what matters in how we think. This means that, irrespective of whether the content of understanding can be expressed propositionally, the nature of understanding cannot be reduced to knowing these propositions. We need

to take up the relationships between these propositions in the way that we think, such that we do in fact attend to what matters.

## 5.2 Instrumental to Knowledge-That

Another objection says that, although understanding is not reducible to knowledge, it is only instrumentally valuable in gaining knowledge. In other words, the representations that figure in our understanding are tools that may actually or potentially produce knowledge and attending to what matters is valuable as a prerequisite for reasoning that produces knowledge-that.

If understanding is only instrumentally valuable to knowledge in this way, we would expect the value of knowledge to ‘swamp’ understanding. By analogy, the coffee machine that reliably produces good coffee is only instrumentally valuable to good coffee and, therefore, if we have a good coffee, we don’t care about whether it was produced by a reliable coffee machine (Zagzebski 2003, 15). This analogy demonstrates the swamping problem for knowledge; if knowledge is only instrumentally valuable in reliably securing true belief, then once we believe the truth, we shouldn’t care about whether we know the truth. Similarly, if understanding is only instrumentally valuable to knowing-that, we should be able to do away with attending to what matters and the representations of the world that enable it.

We clearly cannot go without attentiveness to what matters, even when we know everything we need to know. The cases in Section 1 demonstrate this very idea. If we were to let go of the representations that selectively emphasise, vividly represent, or resonate in ways that support attentiveness to what is important, something would be lost epistemically. The world would be less intelligible. Some might suspect I’ve gone wrong here. Understanding is not swamped by knowledge for real agents who must contend with practical limitations but it is swamped for the *ideal* epistemic agent. The only reason that the agents in Section 1, and the son in *Faulty Wiring*, are at risk of being misled by information that distracts from what matters is due to their practical limitations. In other words, accumulating knowledge-that is the ideal and considerations to do with understanding are just a second-best in non-ideal circumstances.<sup>12</sup>

However, this focus on ideal agents is problematic, insofar as it recommends epistemic norms that tell us to prefer and primarily strive for knowledge over understanding. Consider the argumentative strategy in Robin McKenna’s (2023, 24)

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<sup>12</sup> Perhaps this would fit with Christoph Kelp’s (2015) view that maximal understanding of a given phenomenon is just fully comprehensive and well-connected knowledge and degrees of understanding are approximations of this knowledge.

non-ideal approach to epistemology: the problem with ideal epistemic norms is not that they are unattainable, we can still do well by striving for what is unattainable, but that they fail to be guiding. Some ideal norms can lead us astray because we do *worse* epistemically by attempting to abide by them. For example, McKenna (2023, 87-104) argues that attempting to meet the ideal of intellectual autonomy leads us astray by undermining our other epistemic goals. By attempting to achieve knowledge, wherever knowledge is possible, and only seeking understanding as a second-best alternative when it is not, we would also do worse epistemically because we would neglect the crucial and unavoidable role of attention in our epistemic lives. In other words, understanding is not swamped by knowledge for real agents and we should seek a picture of epistemic norms and values that are guiding for real epistemic agents.

### 5.3 Non-Epistemic Values

Another worry is that the value of attending to what matters is non-epistemic. If this is right, understanding has distinctive value in terms of attending to what matters, but it is not distinctive *epistemic* value. Consider Kareem Khalifa's (2020, 954) point that, although those who understand notice things that others do not and therefore it seems plausible that 'highlighting and revealing' is a valuable feature of understanding, highlighting has no *epistemic* value over and above arriving at true answers to relevant questions. Khalifa argues that any truth or its opposite can be made salient to an epistemic agent and in the latter case, one's epistemic situation worsens. This means 'salience has no inherent epistemic value: everything hinges on what's being made salient' (Khalifa 2020, 954). What determines whether a highlighted truth has *epistemic* value is that it is true, not that it is highlighted.

It seems right that highlighting has no epistemic value itself. It is highlighting what matters that has epistemic value. The worrying objection here though is that highlighting what matters only has epistemic value in virtue of highlighting something *true* and any additional value beyond this is non-epistemic, e.g. bringing about morally or practically valuable responses. After all, epistemic states can have non-epistemic value and perhaps it is the non-epistemic value of understanding that explains why we often prefer to understand (Pritchard 2014). Annie, for example, already knows the truth about animal suffering and her *knowledge* has epistemic value but maybe she gains additional non-epistemic value when she believes the truth in a practically and morally valuable way, i.e. in a way that guides her to do the right thing, and perhaps this is what understanding offers beyond knowing the truth.

Contrary to this point, the epistemic value in attending to what matters is not exhausted by knowing the truth. Although the epistemic value of attending to what matters still centres truth, because it is to do with getting the world right, to deny that understanding has distinctive epistemic value on these grounds conflates different ways we can get the world right. Maybe the value of understanding and knowledge both make essential reference to accuracy but they meet the accuracy condition in systematically distinct ways and therefore have distinct epistemic values. To know, S must have a belief in p that is true and any given set of true beliefs (that amount to knowledge) can still have this epistemic value and yet obscure what matters. Understanding, however, cannot improve by obscuring what matters. Explaining this difference in terms of something non-epistemic, such as our practical, moral or emotional responses, does not recognise that these responses are prompted by the initial epistemic change. What changes for Annie is not just that she becomes moral or practically rational or that she feels certain emotions after going to the slaughterhouse. Her emotions and her behaviour changes because how she thinks about the world changes; there is a distinct way that her mind meets the world that was previously lacking. Annie gets the world right by representing the world in a way that respects what matters and this improvement prompts changes in her attitudes, behaviour and emotions. We cannot fully explain what is valuable about this improvement by referring to the non-epistemically valuable changes that follow from it.<sup>13</sup>

## 6. Conclusion

I have argued that understanding has distinctive epistemic value because understanding involves attending to what objectively matters. More specifically, when we improve understanding, we cannot worsen our attentiveness to what matters. This reveals an explanation for the distinctive and, at least in some contexts, superior epistemic value of understanding: understanding guarantees contact with what matters in a way that knowledge does not.<sup>14</sup>

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<sup>13</sup> Bourget (2017) makes a similar argument that we cannot explain why we react differently to experiences and statistics by referring to emotions evoked by experiences. This is because the emotions are part of the reaction we are trying to explain; we want to know why we have certain emotions in response to experiences that we do not have in response to statistics. Note that Bourget (2017, 292) suggests this is not epistemic as such, writing that grasp is a mental phenomenon independent from one's epistemic state because it is not a matter of change in truth or justification of one's beliefs. However, I would say that grasping is a way of getting the world right that allows us to reason more competently and this, for me, falls within the realm of the epistemic.

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## References

- Arpaly, Nomy. 2011. 'Open-Mindedness as a Moral Virtue'. *American Philosophical Quarterly* 48 (1): 75–85.
- Bengson, John. 2015. 'A Noetic Theory of Understanding and Intuition as Sense-Maker'. *Inquiry* 58 (7–8): 633–68. <https://doi.org/10.1080/0020174X.2015.1083473>.
- . 2017. 'The Unity of Understanding'. In *Making Sense of the World: New Essays on the Philosophy of Understanding*, edited by Stephen R. Grimm. New York, NY: Oxford University Press.
- Bourget, David. 2017. 'The Role of Consciousness in Grasping and Understanding'. *Philosophy and Phenomenological Research* 95 (2): 285–318. <https://doi.org/10.1111/phpr.12208>.
- . 2025. 'A Phenomenal Theory of Grasping and Understanding'. In *Understanding and Conscious Experience: Philosophical and Scientific Perspectives*, edited by Andrei Ionuț Mărășoiu and Mircea Dumitru. New York, NY: Routledge.
- Brogaard, Berit. 2005. 'I Know. Therefore, I Understand'. Unpublished work.
- Camp, Elisabeth. 2019a. 'Imaginative Frames for Scientific Inquiry: Metaphors, Telling Facts, and Just-So Stories'. In *The Scientific Imagination*, edited by Arnon Levy and Peter Godfrey-Smith. New York, NY: Oxford University Press.
- . 2019b. 'Perspectives and Frames in Pursuit of Ultimate Understanding'. In *Varieties of Understanding: New Perspectives from Philosophy, Psychology, and Theology*, edited by Stephen R. Grimm. New York, NY: Oxford University Press.
- Carroll, Lewis. 1895. 'What the Tortoise Said to Achilles'. *Mind* 4 (14): 278–80. <https://doi.org/10.1093/mind/IV.14.278>.
- Elgin, Catherine Z. 2007. 'Understanding and the Facts'. *Philosophical Studies* 132 (1): 33–42. <https://doi.org/10.1007/s11098-006-9054-z>.
- . 2017. *True Enough*. Cambridge, MA: MIT Press.
- Friedman, Jane. 2018. 'Junk Beliefs and Interest-Driven Epistemology'. *Philosophy and Phenomenological Research* 97 (3): 568–83. <https://doi.org/10.1111/phpr.12381>.
- Grimm, Stephen R. 2011. 'What Is Interesting?' *Logos & Episteme* 2 (4): 515–42. <https://doi.org/10.5840/logos-episteme2011243>.

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- . 2012. 'The Value of Understanding'. *Philosophy Compass* 7 (2): 103–17. <https://doi.org/10.1111/j.1747-9991.2011.00460.x>.
- . 2006. 'Is Understanding a Species of Knowledge?' *The British Journal for the Philosophy of Science* 57 (3): 515–35. <https://doi.org/10.1093/bjps/axl015>.
- . 2014. 'Understanding as Knowledge of Causes'. In *Virtue Epistemology Naturalized: Bridges Between Virtue Epistemology and Philosophy of Science*, edited by Abrol Fairweather. Cham: Springer.
- Harman, Gilbert. 1999. *Reasoning, Meaning and Mind*. New York, NY: Oxford University Press.
- Hills, Alison. 2016. 'Understanding Why'. *Nous* 50 (4): 661–88. <https://doi.org/10.1111/nous.12092>.
- Jenni, Kathie. 2003. 'Vices of Inattention'. *Journal of Applied Philosophy* 20 (3): 279–95. <https://doi.org/10.1046/j.0264-3758.2003.00253.x>.
- Kelp, Christoph. 2015. 'Understanding Phenomena'. *Synthese* 192 (12): 3799–816. <https://doi.org/10.1007/s11229-014-0616-x>.
- Khalifa, Kareem. 2020. 'Understanding, Truth, and Epistemic Goals'. *Philosophy of Science* 87 (5): 944–56. <https://doi.org/10.1086/710545>.
- Kvanvig, Jonathan. L. 2003. *The Value of Knowledge and the Pursuit of Understanding*. New York, NY: Cambridge University Press.
- . 2009. 'The Value of Understanding'. In *Epistemic Value*, edited by Adrian Haddock, Alan Millar, and Duncan Pritchard. Oxford: Oxford University Press.
- McKenna, Robin. 2023. *Non-Ideal Epistemology*. Oxford: Oxford University Press.
- Pritchard, Duncan. 2008. 'Knowing the Answer, Understanding and Epistemic Value'. *Grazer Philosophische Studien* 77 (1). <https://doi.org/10.1163/18756735-90000852>.
- . 2009. 'Knowledge, Understanding and Epistemic Value'. *Royal Institute of Philosophy Supplement* 64: 19–43. <https://doi.org/10.1017/S1358246109000046>.
- . 2010. 'Knowledge and Understanding'. In *The Nature and Value of Knowledge: Three Investigations*, edited by Duncan Pritchard, Alan Millar, and Adrian Haddock. Oxford: Oxford University Press.
- . 2014. 'Truth as the Fundamental Epistemic Good'. In *The Ethics of Belief*, edited by Jonathan Matheson and Rico Vitz. Oxford: Oxford University Press.
- . 2024. 'The Nature and Value of Understanding'. In *Understanding and Conscious Experience: Philosophical and Scientific Perspectives*, edited by Andrei Ionuț Mărășoiu and Mircea Dumitru. New York, NY: Routledge.

Alice Wheatley

- Sliwa, Paulina. 2015. 'IV—Understanding and Knowing'. *Proceedings of the Aristotelian Society* 115 (1): 57–74. <https://doi.org/10.1111/j.1467-9264.2015.00384.x>.
- Sosa, Ernest. 2003. 'The Place of Truth in Epistemology'. In *Intellectual Virtue: Perspectives from Ethics and Epistemology*, edited by Michael DePaul and Linda Zagzebski. Oxford: Oxford University Press.
- Sterman, John D. 2011. 'Communicating Climate Change Risks in a Skeptical World'. *Climatic Change* 108 (4): 811–26. <https://doi.org/10.1007/s10584-011-0189-3>.
- Strevens, Michael. 2013. 'No Understanding without Explanation'. *Studies in History and Philosophy of Science Part A* 44 (3): 510–15. <https://doi.org/10.1016/j.shpsa.2012.12.005>.
- . 2024. 'Grasp and Scientific Understanding: A Recognition Account'. *Philosophical Studies* 181 (4): 741–62. <https://doi.org/10.1007/s11098-024-02121-x>.
- Stroud, Barry. 1979. 'Inference, Belief, and Understanding'. *Mind* 88 (350): 179–96. <https://doi.org/10.1093/mind/LXXXVIII.1.179>.
- Zagzebski, Linda. 2001. 'Recovering Understanding'. In *Knowledge, Truth, and Duty: Essays on Epistemic Justification, Responsibility, and Virtue*, edited by Matthias Steup. New York, NY: Oxford University Press.
- . 2003. 'The Search for the Source of Epistemic Good'. *Metaphilosophy* 34 (1–2): 12–28. <https://doi.org/10.1111/1467-9973.00257>.