Truth, Precision, and Epistemic Value

Abstract: in this paper, we examine the nature of a value rarely discussed in epistemology: precision, and consider whether it poses a problem to the truth monist. We argue that it does not and in so doing, we offer a view of how there are several ways of being truth-conducive, something which may allow the truth monist to account for some of the value often raised against truth monism.

The task of deciding what is or is not good in itself is by no means an easy one. - G.E. Moore, *Principia Ethica*

In epistemology, some think that only truth has intrinsic epistemic value; they are sometimes called ‘value monists’ (e.g. DePaul 2001; Zagzebski 2004), but just to be clear, let’s call them ‘truth monists’. As it is usually described, truth monism takes true belief to be the sole intrinsic epistemic good (i.e. its value is non-derivative, it is valuable for its own sake). Other epistemic goods (e.g. justified belief) possess epistemic value only derivatively: in virtue of their relation to truth. The precise nature of this relation is not often perspicuously presented, but is most often glossed as “promote”, “bring about” or something similar; we will follow this course for now.

Certain puzzles confront the truth monist; for instance, of the truths there are, it seems intuitive not only that some truths might be more (epistemically) valuable than others, but that there might be some truths which are trivial and may possess little or even no intrinsic value at all. However, while much attacked, truth monism is something like

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2. We are concerned here with epistemic value, not aesthetic, prudential, or ethical value.
3. One often finds formulations of the principle of truth monism to be along the following lines: ‘Any epistemic value other than the truth of a belief derives from the good of truth’ (Zagzebski 2004: 191), or ‘True belief is the sole fundamental epistemic good’ (Pritchard 2010:14). Note that neither Pritchard nor Zagzebski endorse the principle. Cf. Grimm (2009:246-7) for further quotations.
4. We follow the convention in epistemic value discussions of identifying intrinsic value with final or non-instrumental value; however, see Korsgaard (1983).
5. Thus, e.g. Grimm (2009:243): “a belief earns positive marks, for man epistemic point of view just to the extent that it seems to promote or in some way bring about the things with intrinsic epistemic value”. Notice that Grimm thus characterises the tendency to make epistemic evaluations in teleological terms (a tendency which he then goes on to criticise for reasons different than those presented here).
6. Lynch (2004) argues that while they might lack pragmatic value, even trivial truths possess intrinsic epistemic value. These matters are more often explicitly discussed with regard to epistemic aims.
the traditional view and has several things going for it in the way of intuitive appeal.\(^8\)
It is not our purpose to defend truth monism in any detail here; however, it will be
convenient to consider precision and its value within a framework of truth monism.
This makes clear, we believe, some of the options available to the truth monist when it
comes to considering the different ways in which those things which possess extrinsic
value may (broadly) be seen as truth-conducive (i.e. which “promote”, “bring about”
truth).

The most intuitive and simple (though perhaps to the point of being simple-minded)
way of attacking truth monism will be useful to consider here. This method, one with
a long pedigree in considerations of intrinsic value,\(^9\) involves performing comparisons
of the following sort and asking which (supposing other things to be equal) is of
greater epistemic value:

\[(i) \text{ a justified false belief that } p; \]
\[(ii) \text{ an unjustified true belief that } p.\]

If the choice between these two seems in any way problematic (as it is expected to)
then it is meant to reveal that a belief being justified does not posses epistemic value

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(rather than \textit{value}). Thus, for instance, in discussing or offering qualifications of the view that the
maximizing of true beliefs and the minimizing of false beliefs are the aims of epistemic agents qua
epistemic agents (e.g. Alston 1989: 83-4), it is common to restrict these to \textit{significant truths}, or
those of interest to the agent (e.g. David 2001; Alston 2006:32ff). The notion that \textit{value} (rather than
\textit{aims}) might be agent-relative is, it seems (pace Grimm 2009:248), less often explicitly discussed.
We will put aside such issues for now, focusing instead on the manner in which beliefs concerning
the same subject matter (though differing in content) differ in epistemic value.

There are a number of common epistemic value problems which truth monism is thought poorly
equipped to deal with. Pritchard (2010) helpfully disambiguates between several problems that
might be seen to arise here: they concern accounting for the greater epistemic value of knowledge
to true belief, or anything that falls short of knowledge, and the distinctive value of knowledge.
Notice that while taking \textit{understanding} to be an intrinsic epistemic good is often motivated by the
value problems mentioned above, doing so does not typically offer a direct answer to these value
problems. Instead, proponents of the value of understanding (e.g. Kvanvig 2003) typically seek to
claim that it is \textit{understanding} (not knowledge) that has greater epistemic value than true belief, etc.
The problem perhaps most often raised against truth monism is the so-called “swamping problem”.
See Kvanvig (2003: 45-8); Zagzebski (2003); Pritchard (2010). Pritchard (2010: 15) offers perhaps
the clearest diagnosis of the problem and sees it as arising from adherence to three mutually
inconsistent claims: (α) the epistemic value conferred on a belief by that belief having an epistemic
property is instrumental epistemic value relative to the further epistemic good of true belief; (β) if
the value of a property has only instrumental value relative to a further good and that good is
already present, then it can confer no additional value; and (γ) knowledge that \(p\) is sometimes more
epistemically valuable than mere true belief that \(p\). For ways to resist, see Brogaard (2007),
Goldman and Olsson (2008). What we have to say considering the different ways of being truth-
conducive brings out, we think, another way of resisting the problem.

\(^8\) See David (2001); DePaul (2001:172-4).
\(^9\) Cf. Moore (1912:236-7).
solely in virtue of its relation to truth (that for the sake of which it is valued); justification then is meant either to itself possesses intrinsic value or else derive at least part of its value from something other than truth.\textsuperscript{10} This being the case, (the thought goes)\textsuperscript{11} truth monism doesn't respect our intuitions about epistemic value: we should either take something else to have intrinsic value (e.g. knowledge, perhaps in a Williamsonian vein), or else adopt value pluralism: according to which there is more than one intrinsic value. One can raise similar cases, comparing (for instance) $S$ and $S^*$ who have the same number (or near enough) of true beliefs, but $S$ possesses understanding while $S^*$ lacks it; it seems odd (the thought goes) to suppose that the epistemic achievements of $S$ and $S^*$ are of equal epistemic value, and it is proposed that understanding (or something else) also possesses intrinsic value.

Now, it is by introducing comparisons in a similarly simple-minded vein, that we will here discuss the value of a quality rarely discussed in epistemology: \textit{precision}. Precision is concerned with degree of exactness or detail. Like accuracy and unlike truth, it admits of degrees. On a common understanding, precision (unlike accuracy) is not defined primarily in terms of its relation to truth.\textsuperscript{12} Thus a belief that the height of the Eiffel Tower to one significant figure is 300 metres, though imprecise is true; however, though more precise, a belief that the height of the Eiffel Tower to three significant figures is 528.7 metres, is false.\textsuperscript{13} However, the precision with which we are concerned here is factive: it is truth-entailing (cf. \textit{genauigkeit} in German);\textsuperscript{14} thus, when we talk about the value of precision, we are primarily concerned with the value of truth-entailing precision.\textsuperscript{15} This suffices, we hope, for a sketch as to the nature of precision. Now, consider the following:

(1) a belief that the value of $\pi$ to one significant figure (s.f.) is 3;

\textsuperscript{11} To be clear, we are here describing a line of thought which we later (below) reject.
\textsuperscript{12} The \textit{OED} defines the relevant sense of precision (2.c, s.v.) as “The degree of refinement in a measurement, calculation, or specification, esp. as represented by the number of digits given. Contrasted with accuracy (the closeness of the measurement, etc., to the correct value)”. Cf. the \textit{OED} entry for accuracy (2, s.v.): “The closeness of a measurement, calculation, or specification to the correct value. Contrasted with precision (the degree of refinement of the measurement, etc.).”.
\textsuperscript{13} Suppose that the height of the Eiffel Tower is, as reported by an internet search, 324 metres.
\textsuperscript{14} Notice that other languages sometimes do not seem to make a distinction between accuracy and precision. For instance, in German, “precise” might be translated as \textit{präzise} and “accurate” as \textit{akkurat} (or \textit{genau}), but both “precision” and “accuracy” are typically translated (e.g. the \textit{Oxford English-German Dictionary}) as \textit{Genauigkeit}. This is perhaps closest to what we want.
\textsuperscript{15} This is the sense with which “precision” is often colloquially used by scientists or engineers when talking about (e.g.) a precise measuring apparatus.
(2) a belief that the value of π to six significant figures (s.f.) is 3.14159.

Both of these beliefs are true; however, ceteris paribus, (2) seems to possess greater epistemic value than (1). Thus, consider also the following:

(3) a belief that Winston Churchill was born in Europe;
(4) a belief that Winston Churchill was born in Oxfordshire;

(5) a belief that the car that has just passed by is coloured;
(6) a belief that the car that has just passed by is green in colour;

(7) a belief that the height of the Eiffel Tower to one s.f. is 300 metres;
(8) a belief that the height of the Eiffel Tower to three s.f. is 324 metres;

Suppose further that these are all true. It does, we think, seem fairly clear that, ceteris paribus, the latter of each pair possesses greater epistemic value than the former and does so in virtue of its greater precision. If this is right, then there is an obvious conclusion: precision possesses epistemic value. A question which naturally arises, and that which we wish to consider here, is how this value relates to truth. In particular, notice that if we evaluate (7) and (8) with regard to their safety or sensitivity, then (8) is in fact less safe (and sensitive) than (7); the same applies if we evaluate (7) and (8) in terms of evidence or justification: any evidence in favour of (8) is evidence in favour of (7), but not vice versa. The same seems to apply with pretty much any notion of justification. That is to say, with regard to a number of ways of being truth-conducive, (7) turns out to be more truth-conducive than (8). Now, if (7) is more truth-conducive than (8) and yet (8) seems to possess epistemic value than (7), it might seem that (8) derives this greater epistemic value not in virtue of its truth-conduciveness and this in turn might seem like a worry for the truth monist. However, there is a simple response available to the truth monist here. While (7) and (8) may be equally true, and (7) is, when considered with regard to safety, justification, etc. more truth-conducive than (8), there is a simple and straight-forward way in which (8) is more truth-conducive than (7): (8) is productive of more true beliefs than (7). That is to say, there is more than one way of being truth-conducive. A belief’s being justified, safe, etc. is truth-conducive insofar as the justification, safety, etc. concerns the
formation of the beliefs: its inputs, and the likelihood that the belief in question is true. By contrast, precision is truth-conducive insofar the precision of a belief concerns the outputs of a belief: the ability of a belief to produce further true beliefs. Thus, it seems plausible to take the more precise belief to possess greater epistemic value because it either contains or entails more truths.\textsuperscript{16}

We can’t give a full exploration of the value of precision here; but notice how even this brief consideration reflects on truth monism. When it comes to aims (which are different from values),\textsuperscript{17} the truth monist, just like the rule-utilitarian, can give a good account of why agents even though it is true beliefs that are of intrinsic value, the epistemic agent should aim at (e.g.) justified beliefs. However, the truth monist can also give a plausible account when it comes to values. For the truth monist, everything that is of value must either possess the one intrinsic value (true belief), or else must “promote”, “bring about” that one intrinsic value (i.e. be truth-conducive). Recognising the wideness of the scope of truth-conduciveness, in the manner proposed above, may provide the truth monist with a way of better articulating the value of some of those things which are traditionally thought problematic for truth monism. To offer two very brief examples: the truth monist might take knowledge to be more valuable than mere true belief due (like Williamsonians) to its greater resilience to rational undermining by future evidence.\textsuperscript{18} However, this, in turn might be construed by the truth monist in terms of truth-conduciveness: if $S$ knows that $p$, then at some future time when $S$ is presented with some misleading evidence, $S$ is more likely to retain their (true) belief that $p$. That it to say, knowledge is more truth-conducive than mere true belief insofar as you are more likely to have true beliefs (even if it is merely a question of retaining true beliefs) further down the line. Similarly, while one might think that understanding why $p$ is so possesses greater epistemic value than merely believing (truly) that $p$, (perhaps) in virtue of some explanatory awareness that such understanding brings, the truth monist (it seems) can plausibly to the truth-conduciveness of understanding: the predictive power often attributed to understanding.

\textsuperscript{16} Intuitions differ here; we say “contains” because it seems more apt for the numerical cases; believing that the height of the Eiffel Tower to 3 s.f. is 324 metres seems to involve believing that its height to 1 s.f. is 300 metres. By contrast, “entails” seems more apt for other cases. For instance, with regard to (3) and (4) it is feasible to believe (4) without believing (3) simply owing to ignorance that Oxfordshire is located in Europe.

\textsuperscript{17} This difference between aims and values is sometimes elided in epistemic discussions.

\textsuperscript{18} Williamson (2000: 78-80).
References


