

On Roses, π , and Understanding

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I am struck by the thematic and stylistic richness of the seldom-discussed early to mid-§§500s of the *Philosophical Investigations*. The couplet of §515 and §516 evidence this richness:

515. Two pictures of a rose in the dark. One is quite black; for the rose is invisible. In the other, it is painted in full detail and surrounded by black. Is one of them right, the other wrong? Don't we talk of a white rose in the dark and of a red rose in the dark? And don't we say for all that that they can't be distinguished in the dark?

516. It seems clear that we understand the meaning of the question: "Does the sequence 7777 occur in the development of π ?" It is an English sentence; it can be shown what it means for 415 to occur in the development of π ; and similar things. Well, our understanding of that question reaches just so far, one may say, as such explanations reach.

Initially, what I find most striking is simply the odd juxtaposition. First we get the quiet, stark, (perhaps) beautiful image of roses in darkness. (In one of the few comments on this passage, Garth Hallett (Hallett 1977, pp. 522–23) does remark that "[i]t is easy to miss the beauty of this example.") Following this, we are confronted with the decidedly prosaic specter of the decimal expansion of π .

It is unlikely that these two sections just happened to end up next to each other. Wittgenstein associated this talk of "roses in the dark" with questions about mathematical understanding at least as early as 1941—although their final arrangement was not made for at least four more years.¹ One goal of this paper is to suggest something of what Wittgenstein intended with this pairing of sections.

It will become clear that a number of significant themes are connected with these sections. I aim to relate §§515–516 to considerations about understanding, mathematical understanding, behaviorism, and meaning. My broader goal is to demonstrate why the §§500s deserve as much attention as earlier sections of the *Investigations*.

1. Considering §515 in isolation is a dangerous interpretive strategy. So let's pay some attention to §514 first. This section reads:

514. A philosopher says that he understands the sentence "I am here", that he means something by it, thinks something—even when he doesn't think at all how, on what occasions, this sentence is used. And if I say "A rose is red in the dark too" you positively see this red in the dark before you.

I'll ignore the disparaging remark about philosophers; I think that we can do so without damaging the substance of Wittgenstein's observation. "I am here," would seem to be a sentence that must be true whenever uttered and hence is always meaningful. Wittgenstein suggests that consideration of how this sentence might be used will undermine the presupposition that this sentence will always be meaningful.

Consulting Wittgenstein's *Nachlass* (MS 175, pp. 50r–v), we can find an elaboration: "the words 'I am here' have a meaning only in certain contexts, and not when I say them to someone who is sitting in front of me and sees me clearly." So, suppose I am sitting on a train across from a man. I happen to glance up and catch his eye, at which point he looks very serious and says, "I am here." Now, I would have no idea why he said what he did and so would have no idea what his words meant.² If we accept this, then Wittgenstein's point is made: we cannot assume that we would know what "I am here" means independent of situations in which it might be asserted. To say you understand something is to say that you know what it means; you understand what sense it makes. Knowing what something means, Wittgenstein highlights in various places, is something that comes about, when it does, in a given context (in this section's neighborhood, consider, e.g., §525)—and here we get a similar treatment of *understanding*. What is of utmost importance about these apparent "conclusions" is that they're justified because of what we say about the meanings of our words or what we say about what we understand. They aren't, for instance, based on some theory of meaning that justifies what we say. Saying that you understand a sentence in isolation is inconsistent with other things we'd normally say about a sentence, given that we understand it. For instance: what was the point of saying it?

2. Concluding §514, Wittgenstein says, "[a]nd if I say 'A rose is red in the dark too' you positively see this red in the dark before you." Clearly this sentence ("a rose is red in the dark too") is meant to correspond to "I am here."³ I believe that Wittgenstein offers this second example because he appreciates the oddness in what he's saying; it's quite natural to say that one fully understands "I am here" or "a rose is red in the dark too," as their grammars are straightforward and compelling. Thus Wittgenstein suggests that "you positively see this red in the dark before you": that's what the sentence says, after all. I'd suggest that *seeing the red in the dark before you* is a proxy for a particular way in which we understand the sentence "a rose is red in the dark too." It is a representation of what we might take its meaning to be.

§515 comes, then, as a response to what Wittgenstein takes to be the entrenched view that the meaning of a sentence can be completely understood in isolation. Each of his "[t]wo pictures of a rose in the dark" is a plausible candidate as an understanding of the sentence. Hence, the implied answer to his question about whether one picture or the other is correct is "no." Apart from a context, we have reasons in favor of either representation.

My claim is that §515 is about the contextuality of our understanding. Wittgenstein grants the mentalistic talk of "what I had in mind"; he makes it more concrete and shows that such an assumption does not necessarily determine the meaning of a sentence, or determine whether I've understood. Either of the offered pictures could capture something about "a rose is red in the dark too," de-

¹ Interestingly, Wittgenstein's use of sentences including "roses" goes back at least to 1931 (MS 110) where "rose" sentences are already often paired with mathematical ones: e.g., "the rose is red" alongside "2 x 2 is 4".

² One might object by making the distinction between speaker and expression meaning, but Wittgenstein will not accept this as useful.

³ Hacker disagrees (Hacker 1996, pp. 208–10); if this indicates that he believes the rose sentence means what it does without specifying circumstances of use, then this conflicts with what I see as the point of §514.

pending on the circumstance.⁴ It is not that “what I had in mind” is wrong—rather, it is at best only part of the story about my understanding, about my meaning what I did. My performance in an actual situation will always potentially supervene on claims based on “what I had in mind.” The worst case is that “what I had in mind” is *irrelevant* to our saying what the meaning of a sentence is or whether I’ve understood it.

I don’t think that Wittgenstein is concerned, as Hacker and Hallett understand him, to say that what we imagine is somehow inadequate or wrong. Rather, the point is that regardless of what one imagines in connection with a given sentence, it is not sufficient to guarantee that you are making sense or that you have understood. This is confirmed by a remark temporarily added in to this section in a stage of revision, in TS 233a: “That one can ‘imagine’ something does not mean that it makes sense to say it.”

3. Wittgenstein distances himself from the claim “that we understand the meaning of the question: ‘Does the sequence 7777 occur in the development of π ?’” Now, instead of a sentence such as “I am here” or “a rose is red in the dark,” he is putting forth a question and suggesting that it is somehow parallel to those statements.

Wittgenstein begins by suggesting why it is that this question *does* look like one that we would clearly understand. It is grammatically well formed: “it is an English sentence.” But grammaticality is not sufficient for understanding a sentence—this is surely a lesson from §514. He cites another reason why we might be inclined to think that we clearly understand the meaning of this question: “it can be shown what it means for 415 to occur in the development of π ...” We know that “415” occurs at the second place in the development of π , which we all know to begin “3.1415...” Asking about “7777” is clearly similar to asking about “415.”

In 1941, it was not known that the string “7777” does occur in the expansion of π (at the 1589th place). So we might characterize things by saying that there is an unknown element to the question as it stands. But surely, one might interject, that’s the point of a question—there’s something unknown, we ask about it, and then hopefully someone comes up with a good answer. I’ll return to this.

Let’s relate this discussion back to the talk of roses. One picture of a rose in the dark was “quite black,” rendering the rose invisible. It is of note that this picture might correspond to our actual experience of seeing a rose in complete darkness. However, it is also the case that such a picture could correspond to our experience of seeing *nothing* in complete darkness. (Notice that this reverses the direction of the discussion in §§514–515.) Our ignorance of “7777” in the expansion of π is comparable to seeing darkness. We do not see “7777,” but we don’t know if this is because we haven’t found it yet, or because it isn’t in fact there.

Hence, “our understanding of that question reaches just so far, one may say, as such explanations reach.” This statement is important. Wittgenstein’s conclusion is *not* that we fail to understand the question entirely, but rather that we understand it to the extent that we can compare it to other situations of which we have a better understanding. All of this talk makes clear the fact that Wittgenstein

wants to allow for what one might call degrees of understanding; we might say that *understanding something* is not an all-or-nothing matter. This leads to the following corollary: if understanding is not an all-or-nothing matter but being in a (mental or physical) state is, then understanding cannot consist in being in a certain state.

The thing that makes the mathematical case troubling is that it seems as though there must be an answer, already, out there somewhere, even if we don’t know it yet. But Wittgenstein’s main point is that *even if there were* such an answer out there, it is not now what we would call “part of our knowledge,” or that of which we have an understanding—and his reasons for saying this are our ordinary reasons for saying when we understand something.

A common appraisal of Wittgenstein is that he is a verificationist about mathematics. If true, this would be a good criticism in part because it would, as Wittgenstein himself realizes in 1930, “wipe out the existence of mathematical problems.” I would suggest that it is Wittgenstein’s account of mathematical questions—and the search for mathematical proofs—that actually makes some sense of how it is that we could, for instance, try to prove something that was impossible to prove for two thousand years. The answer is straightforward: we lacked some needed understanding.

4. Before I conclude, I want briefly to examine the section that lived for a short time in between our §515 and §516. This occurred in TS 228, which represents the final stage of revision before the *Investigations* took the form we know it as. This section is now §414 in the *Investigations*:

414. You think that after all you must be weaving a piece of cloth: because you are sitting at a loom—even if it is empty—and going through the motions of weaving.

Why might one be tempted to assert something like “if you’re sitting at a loom and you’re making weaving motions, then you’re weaving”? One might hold a view, call it “behaviorism,” according to which a mental act—say, understanding—*consists in* the behavior we associate with that act. But what Wittgenstein highlights is that all of this behavior could be in place although understanding is lacking, just like the weaver who might behave in the appropriate ways but is simply not weaving. If he were giving us an account of what understanding consists in, then he would be running the risk of a kind of behaviorism. But what he says here does not eliminate our mental act. (The different rose pictures *are* important to us. They’re not simply “grossly inaccurate” as Hallett states.) Wittgenstein is not operating at that kind of philosophical level—here or elsewhere in the *Investigations*. Rather, he’s reminding us of different things that we say about understanding and about meaning, in order to prevent us from being tempted to offer any philosophical account of understanding (behaviorism included) or of meaning. Such accounts are most likely going to be irrelevant (and unjustifiable), wrong (because based on some erroneous assumption), or both.

⁴ Hacker has a somewhat different reading of this (and the preceding) section. He says that since neither picture is right and the other wrong, “there is no such thing as correctly picturing a red rose in the dark, [and so] there is no also no such thing as correctly imagining it” (Hacker 1996, p. 210). This seems to give up too much. Hallett also disagrees with my characterization here: “any mental picture seem[s] grossly inaccurate” (Hallett 1977, p. 523).

5. Wittgenstein highlights several false assumptions in the course of these sections:

- (i) that my understanding something is strictly “a personal matter” (as one might put it);
- (ii) that mathematical understanding is somehow fundamentally different from non-mathematical understanding; and
- (iii) that understanding is an all-or-nothing matter.

Literature

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