



Morphology, Knowledge and understanding. prolegomena to a pluralist manifesto

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Abstract

The primary objective of this paper is to tentatively investigate how a family-resemblance approach to concepts might be applied to the related notions of knowledge and understanding, with the aim of deflating or redressing ongoing debates surrounding each. Given that the concept of family-resemblance is frequently misinterpreted, and there is a prevailing tendency to revert to more conventional methods of conceptual analysis, the paper offers a comprehensive overview of the notion. To lay the groundwork, it traces the origins of family-resemblance to Goethe's morphological method, illustrating the approach with an example from botany. It then presents a family-resemblance account of the concept of knowledge and understanding.

Keywords Wittgenstein · Waismann · Goethe · Morphology · Family-resemblance · Knowledge · Understanding

“I asked you for one thing and you gave me many; I wanted something simple, and I have got a variety”. Plato, *Theaetetus*: 146d.

“People nowadays think, Scientists are there to instruct them, poets, musicians etc. to entertain them. That the latter have something to teach them; that never occurs to them”. Wittgenstein, *Culture and Value*: 42

The grammar of the word “know” is evidently closely related to the grammar of the words “can”, “is able to”. but also closely related to that of the word “understand”. //The criteria which we accept for ... ‘being able to’, ‘understanding’, are much more complicated than might appear at first sight. //Then has “understanding” two different meanings here? I would rather say that these kinds of use of “understanding” make up its meaning, make up my concept of understanding. for I want to apply the word “understanding” to all this. Wittgenstein, *Philosophical Investigations* §§150, 182, 532.

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1 Introduction

What kind of understanding do we pursue in philosophy? A venerable tradition would say that we investigate the essence of phenomena and that we do so by investigating the corresponding concepts. This tradition goes back to Plato and finds its clearest expression in the *Theaetetus*.

When asked by Socrates “what is knowledge?” Theaetetus initially responds by enumerating examples such as geometry and the art of the cobbler. Socrates immediately corrects him by saying “I asked you for one thing and you gave me many; I wanted something simple, and I have got a variety” (146d). According to Socrates, the art of the cobbler is nothing but knowledge of how to make shoes (146e). So, it presupposes knowledge, and if we do not know what knowledge is, we will not know what the art of the cobbler consists of either.

Faced with Theaetetus’s examples, which span across propositional knowledge–like in geometry–and practical knowledge–like in the art of the cobbler –, Socrates insists that something in common must be found between the two, to account for why they both count as knowledge. Moreover, an enumeration of examples is not a definition of the concept: it does not provide us with its meaning (146e). According to Socrates, unless one knows the definition, one does not really have knowledge of the concept and, therefore, does not have knowledge of the entity to which the concept refers (ibid). Furthermore, the definition must have clear boundaries–i.e., it must uniquely determine for each element of the domain whether it falls under the concept. Finally, as emerges in this and other Platonic dialogues, philosophy itself as an activity has its proprium in the search for the definition/essence of concepts/phenomena such as knowledge, truth, good, beauty, justice–and understanding, of course!

The aims of the paper are, first, to explore how understanding in philosophy would look like if we followed Theaetetus’s lead, instead of Socrates’s, via Wittgenstein’s notion of family resemblance, which, in its turn, is indebted to Goethe’s morphology, as presented in the *Metamorphosis of Plants* (1790) (§§1–2). Secondly, to exemplify this approach by applying it to the kindred concepts KNOWLEDGE and UNDERSTANDING¹ and, in closing, to highlight its metaphilosophical consequences (§§3–4).

For if we look at current debates about either notion, it is hard to resist the impression that the counterexamples to one theory–whether of knowledge or of understanding–often presuppose already implicitly adhering to a different one. For instance, if we think of cases where knowledge clearly involves the ability to provide conclusive reasons–for example, when we require proof, in order for a proposition to be known–then *Truetemp* or a chicken-sexer, while reliable at telling the room’s temperature or at determining chicken’s sex, won’t know. However, if we start out by thinking of cases in which subjects can correctly identify objects in their environment, and form true beliefs about them, by utilizing reliable methods, then we will likely think of *Truetemp* or a chicken-sexer as knowing the temperature in the room,

¹ Small caps are used to mention concepts.

or the sex of the chicken they are inspecting, even if they don't know how they do it and, *a fortiori*, are unable to make that explicit.

Furthermore, attempts to reduce the multiplicity of phenomena subsumed under a concept such as KNOWLEDGE to some allegedly more fundamental one, like extant accounts of KNOW-HOW in terms of KNOW-THAT, are often problematical. For either they seem unable to bridge the gap between theoretical and practical knowledge, or else appear as mere reformulations of that distinction, where propositions are said to be known via practical modes of presentation. This in turn raises the difficulty of explaining what practical modes of presentation are, and of specifying exactly the propositions that would be known.²

In the following we will review several examples of these unsatisfactory outcomes, including cases regarding current debates about UNDERSTANDING. The interest of a family-resemblance account of these concepts, then, resides in its ability to do justice to the multiplicity of phenomena, without reducing some of them to allegedly more fundamental ones. Moreover, such an account allows for a multiplicity of criteria which may be used to attribute knowledge or understanding.

Let me also stress that I am not hereby trying to propose, let alone defend, a fully-fledged family-resemblance account of KNOWLEDGE and UNDERSTANDING. Such an undertaking would necessitate significantly more space than is available. This is not merely a rhetorical disclaimer. As will become evident, the variety of cases of knowledge and understanding that would need to be examined, along with the numerous criteria that justify their attribution, is substantial. Adequately addressing both, while also demonstrating in detail how this would impact existing accounts of either, would likely require comprehensive, book-length treatment.

Instead, my aim is simply to provide some initial considerations in favor of such an approach—whence the term “prolegomena” in the title—by showing how, once correctly understood, despite many inclinations to misunderstand it, the notion of family resemblance may at least initially be applied to our leading concepts. Since this involves re-orienting our usual way of looking at things—that is, philosophers' habitual way of doing conceptual analysis –, going through a preparatory example of morphological analysis, in the vein of Goethe's *Metamorphosis of Plants*, will pave the way for such a change in view. Finally, it will be demonstrated how a family-resemblance account can deflate many ongoing debates by reconciling various ostensibly competing proposals. This is achieved by interpreting these proposals as addressing specific instances of knowledge or understanding, rather than interpreting them as the singular, comprehensive explanation applicable to all cases.

2 Family resemblance

In the *Philosophical Investigations*, after criticizing the idea that the main function of language is, on the one hand, to name objects and, on the other hand, to describe possible states of affairs, Wittgenstein goes on to criticize another cornerstone of

² See Stanley and Williamson (2001). I have discussed their proposal in Coliva (2018). Further criticism can be found in Wallis (2008) and Fantl (2012).

Western philosophy (and of the logicist program). Namely, the idea that concepts are identified by definitions, i.e., by sets of necessary and jointly sufficient conditions. E.g.

Bachelor =_{df} unmarried, adult, male, human being

Therefore, everything that satisfies the *definiens* is a bachelor, and you cannot be a bachelor unless you have all the properties (also called “characteristic notes”) listed in the *definiens*.

Thus, if Wittgenstein is right in abandoning definitions, then he is also right in criticizing an entire philosophical tradition, which has set itself the task of determining the essence of entities, or of key properties such as truth, knowledge, goodness, justice, beauty, etc., via conceptual analysis.³ In other words, if his critique is successful, its effects will not concern only how to understand concepts, but also what task to assign to philosophy “after” philosophy. What, then, is philosophy if it can no longer be a search for the essence of phenomena, via conceptual analysis?

According to Wittgenstein, if we reflect on the concept GAME, we realize that we are unable to provide a definition—that is, we cannot determine a set of necessary and jointly sufficient conditions, which would establish, for each object in the domain, whether it falls under that concept. For example: tennis cannot be played alone (not-A), there is a winning and losing (WL). Solitaire, in contrast, is played alone (A), and there is winning and losing (WL). Playing with dolls, like solitaire, can be done alone (A), yet there is no winning and losing (not-WL). These are all games, but there is no set of necessary (and sufficient) conditions they all share.⁴

On the contrary, they are games because they exhibit only family resemblances with each other (PI §§66–67): WL in the case of tennis and solitaire, A in the case of solitaire and playing with dolls, and nothing in common between tennis and playing with dolls, which even so are still both games because of what they respectively

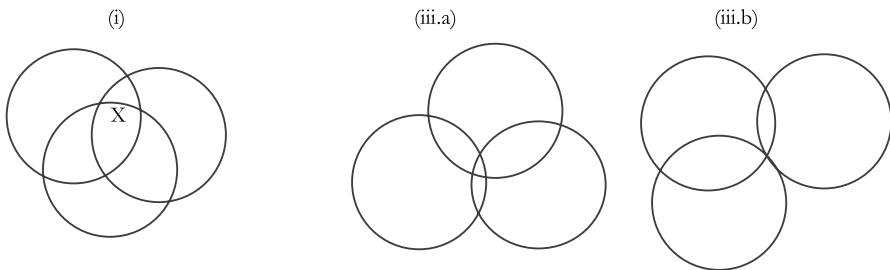
³ Conceptual analysis can then be done in two different ways: either by looking for the one, single, correct definition of a given concept *C*, as per Plato’s (alias Socrates) request; or else by means of definitions of the multiplicity of sub-concepts – C_1, C_2, \dots, C_n . That is, like in Carnap’s (1950) project, we can individuate and explicate several more precise concepts, behind the superficial unity of the folk notion of *C*. The main difficulty with the Carnapian project is then to explain why the various sub-concepts C_1, C_2, \dots, C_n all count as instances of one and the same concept *C*. If their *definiens* are genuinely different and mutually exclusive, then C_1, C_2, \dots, C_n would be instances of a single concept *C* only in the name, no more connected to one another than $BANK_1 =_{df}$ a financial institution and $BANK_2 =_{df}$ a part of a river. A related objection is Strawson’s (1963) charge that explicationism *à la* Carnap would involve a change of subject with respect to the original concept *C*. The situation could be remedied by finding a common minimal core shared by all C_1, C_2, \dots, C_n . This, however, proves to be a daunting task because either the minimal core is too “thin” to really pick out instances of the overarching concept *C*, or else is not “thin” enough to be shared by all C_1, C_2, \dots, C_n . Conversely, if such a common core could be found, then that would seem enough to define the overarching single concept *C*, without a need to explicate it by means of C_1, C_2, \dots, C_n . Cf. also fn. 27. For an illuminating discussion of Carnap’s explicationism within a pluralist framework, see Olsson (2017).

⁴ Should the reader have qualms with one or the other of these examples, they are invited to substitute them with their preferred examples of pairs of games. These pairs should exhibit similarities in one respect, distinct from the respect in which each game, considered separately, resembles one or more other games.

have in common with *other* examples of games, such as solitaire (i.e. WL, in the case of tennis, and A, in the case of playing with dolls).

Thus, intermediate links (PI §122) are crucial in understanding how family resemblance concepts work. As Waismann explained the notion of family resemblance, borrowing Wittgenstein's example of GAME: "it may be merely that *every two games are connected by intermediate links*" (PLP, p. 82). Hence, they may have nothing in common with one another, provided they have something in common with an intermediate link—though not the same feature. Instances of the same concept, then, are like two distinct links in a chain, which are interconnected by an intermediate link, even though they don't touch each other.

This point is crucial, though often misunderstood, or overlooked, even by philosophers broadly sympathetic to Wittgenstein's proposal. For family resemblance doesn't require members of a class to share (i) a *cluster* of substantive properties, even if surely not all of them.⁵ Nor does it demand (ii) a *minimal core* common to all instances of a given concept—that is, a core of formal or syntactic properties which all instances of the concept should share.⁶ Nor is it a prototype theory, such that inclusion within a class is determined by an element's similarity with allegedly focal or paradigmatic cases.⁷ Rather, it requires (iii) each member of the class to be connected with another one by having at least one feature in common (iii.b), while possibly (but not necessarily) sharing a different one with other members of the class (iii.a). We may represent the differences between (i) and (iii), in particular,⁸ with Venn diagrams as follows.⁹



Notice, moreover, that not only games could have one or more of these features. Consider making war (WL but not-A, like tennis), or keeping a diary (A, but not WL, like playing with dolls), or perhaps investing money in the stock market (WL

⁵ This is the kind of account favored by some theorists who have proposed a family-resemblance account of gender concepts, e.g. Stoljar (1995).

⁶ This is the kind of account favored by minimalists about truth, such as Wright (1992) and Lynch (2009).

⁷ Notoriously, Rosch and Mervis (1975) proposed such an account of family resemblance.

⁸ (ii) differs from (i) only with respect to the kind of properties – either substantive or minimal –, which are common to all instances of a given concept.

⁹ This is just for heuristic purposes, for the use of Venn diagrams may engender the thought that each of the nodes in a family-resemblance account be a closed set. The image of the various threads in a rope Wittgenstein proposes in PI (§67) reminds us that this isn't so. There will be more about this issue in the following.

and A). Yet, these activities would not normally count as games (but they may be likened to games in certain contexts).

Thus, it is neither true that everything that is a game satisfies a given set of necessary conditions, nor that it is sufficient to satisfy one or more of those conditions to be a game. So, there is nothing that corresponds to the essence of being a game.¹⁰ Yet, despite lacking a unitary set of necessary and jointly sufficient conditions, we know how to identify games, and we understand each other very well when we say that Rock-paper-scissors, bridge, tennis, solitaire, and playing with dolls are games, while making a war, or keeping a diary are not.

Thus, one does not need to know the definition of *GAME* to know how to use that word (or have that concept), or to determine what is or isn't a game (PI §§69–70). Furthermore, the meaning of the word is taught by showing examples (PI §69) and learning is sanctioned when the learner can apply it to those examples and to similar ones.,¹¹¹²

This is not to say that we can't or shouldn't ever give definitions. In certain contexts, this is entirely legitimate. For example, in the scientific context we can give definitions (e.g., *NATURAL NUMBER*, *MASS*, etc.), just as we can give definitions in the legal context (e.g., *PERSON*, where legal persons may not even be persons in the sense of individuals, e.g., corporations), etc. (PI §68). However, in ordinary language, for a great many terms we do not and do not need to give definitions and thereby set clear boundaries between what is *F*, e.g., a game, and what is not.

A consequence that is seldom noticed is that many of our concepts are open-ended (or open-textured¹³) (PI §68): we can extend them to new cases, which had not been previously subsumed under such concepts (think of the case of *HUSBAND* (or *WIFE*) applied to a person of the same sex, or the case of *WOMAN* (or *MAN*) applied to

¹⁰ One might then think that if something is a game then it must be an enjoyable activity for those who engage in it. Surely, this is often the case, but it need not be. That is, there are games which people play even if they don't find them enjoyable, and there are many activities people enjoy doing that aren't games. No doubt, it is difficult to relinquish the idea that, from a metaphysical point of view, there are no barriers to inclusion within a given concept, at least in principle (and as long as we are considering a family resemblance concept).

¹¹ In the *Theaetetus*, Socrates criticizes Theaetetus and asks him not to give a list of examples, but to tell him what they have in common. Thus begins the search for the definition of "knowledge" and, at once, the search for what knowledge is. The dialogue ends in aporia, like all Platonic dialogues. If Wittgenstein is right, this fact is neither accidental nor surprising. If there is no set of necessary and jointly sufficient conditions common to all and only that which counts as knowledge, it is no accident that we cannot find it, and the failure to find it should not surprise us. What should surprise us – philosophers – is that, despite the recognized failure of such a venerable tradition, we are still going along the same path. Since we have been thinking about these issues for a couple of millennia, perhaps the time has come to realize that the problem is not that we haven't researched the issue long or hard enough, but that the methodology utilized in the first place was flawed.

¹² One might suggest that the definition of *GAME* consists of the logical sum (i.e., disjunction) of all the properties that the various activities we call "game" have (PI §§67–68). Since a disjunction is true if at least one of the disjuncts is, it would follow that making war would count as a game, as would keeping a diary.

¹³ This term is owed to Waismann, with whom Wittgenstein was planning to write a book. *The Principles of Linguistic Philosophy* (1965), published posthumously, collects lectures by Waismann heavily inspired by his association with Wittgenstein.

transwomen (or transmen)). The boundaries of concepts are *indefinitely extensible*, as a result of new empirical discoveries, or varying societal needs.¹⁴¹⁵

This might invite the objection that we may end up including everything under a given concept, as long as it has a similarity with a member of the family. In response, it must be noted that even though in principle this might be the case—just as we might, in principle, reiterate “I know” as many times as we like—in practice, it won’t. For the extension to new cases is driven by our actual yet developing needs.¹⁶ That is, our purposes and needs will de facto drive the process and it is extremely unlikely that they will bring about the inclusion into the class of *F*s of any possible entity as long as it has something in common, albeit not the same feature, with some individual already included within that class. Thus, we don’t normally consider wars instances of *GAME*, even if there is winning and losing at them, presumably because of the fatal consequences they inevitably have. Not having such consequences, or, conversely, being amusing, should not be considered a necessary condition for being a game. For, alas, we have games that have such consequences—like Russian roulette—and games that are not amusing, at least for many. At most, not having fatal consequences or being amusing are only contextually operative criteria for inclusion within the concept *GAME*, taken as a family resemblance one.

Some methodological instances follow from Wittgenstein’s account. First, “Don’t think, look!” (PI §66). Everything is open to the view. We have mental blocks—i.e. resistances—that impede our seeing things right and that make us always go back to the initial metaphysical quest for the essence of this or that.

Secondly, “When you find yourself in ... difficulty always ask yourself: how did we *learn the meaning* of this word, for example of the word ‘good’? Based on what examples? In what language games? Then you will *see* more easily that the word must have a *family of meanings*.” (PI §77, my emphasis).

These injunctions are importantly connected with Goethe’s *Metamorphosis of Plants* (1790). Goethe’s work exerted a deep and long-lasting influence in the German speaking world between the 19th and the early twentieth century. Oswald Spengler (1880–1936), who wrote *The Decline of the West* (1918/1922), was influenced by it, as well as mathematicians such as Felix Klein (1849–1925), who invented

¹⁴ This puts pressure on the analytic/synthetic distinction and in fact Waismann, long before Quine, in a series of papers published in *Analysis* between 1949 and 1953 grew skeptical of it. Wittgenstein, in contrast, did not deny it even though, especially in *On Certainty* and in the *Remarks on Color*, he claimed that, depending on context, the same proposition could be considered either genuinely empirical (and therefore “synthetic”), or grammatical (and in this sense “analytic”). Cf. OC 94–99; RC I, 32; cf. III, 19.

¹⁵ Another well-known consequence is that many of our terms (or concepts) are vague (PI §71) – e.g., it is neither determinately true nor determinately false that a particular shade of color, on the border between yellow and orange, is yellow (or orange). The boundaries of concepts are thus *blurred*. Yet, to say that the *boundaries* of a concept are vague – that is, not sharp or precise –, is not to say that we can no longer apply that concept, i.e., that there are no longer clear cases of, *YELLOW*. There are still many clear cases, but it is only with respect to *peripheral* cases that we can find ourselves unable to decide, in a non-arbitrary way, whether an object falls under that concept or not. Yet, it is a consequence of a family resemblance approach that central cases do not determine once and for all what properties must be had by a given entity to fall under the concept.

¹⁶ I discuss this objection more thoroughly with respect to the case of the extension of *WOMAN* to transwomen in Coliva (2024).

algebraic geometry and gave rise to the Erlangen program. We will look at some of its main tenets not only to bring out this important historical connection, but to train our–philosophers’–minds to look at phenomena differently, by attending to surprising connections that often escape us because we tend to focus on a limited class of cases, theorize about those, and then (hope to) extend those results to all other cases, in the name of an ideal of theoretical unity, which often creates more problems than it can solve.

3 Goethe’s metamorphosis of plants

In the *Principles of Linguistic Philosophy* (PLP 80), Waismann writes, “Our thought here marches [*sic*] with certain views of Goethe’s, which he expressed in the *Metamorphosis of Plants*” (MP).¹⁷ We need to disentangle this claim and thus unveil the choice of the quote in *ex ergo* from *Culture and Value*.¹⁸

There is a *pars destruens* to Goethe’s ideas in MP against a certain “habit” or “way of thinking” (*ibid.*). That is, the one that recognizes “only a single scheme for such similarities, namely the arrangement as a series in time. (And that is presumably bound up with the uniqueness of the causal schema)” (*ibid.*). That is, whenever we perceive similarities, we seek some common origin for them, and we are under “the urge to follow such phenomena back to their origin in the past” (*ibid.*). This is a kind of *Weltanschauung*, as Wittgenstein calls it (PI §122), which sees subsequent phenomena as caused and sometimes developed out of previous ones, in a linear way. Yet, “Goethe’s view shows that this is not the only possible form or conception”—that is, it is not the only way of looking at things (PLP, 81).

Why not? Because in MP Goethe does not make any hypothesis regarding the fact that plants originate and develop from an ancestor, through random mutations that could give rise to new organs. Moreover, Goethe stood opposed to Newtonian projects of explanation of natural phenomena by appeal to deeper causes, as well as to their mathematization. As he famously wrote in *Gedichte* (1827): “Nature has neither kernel nor shell//she is everything all at once”—whence Goethe’s motto “describe, not explain”. Accordingly, everything is already open to the view, it does not require digging deeper in search of a hidden cause. We only need to learn how to see things properly.

The *pars construens* of Goethe’s work, instead, consists in showing how the various plants (or their organs) are simply a modification of an original element. As he

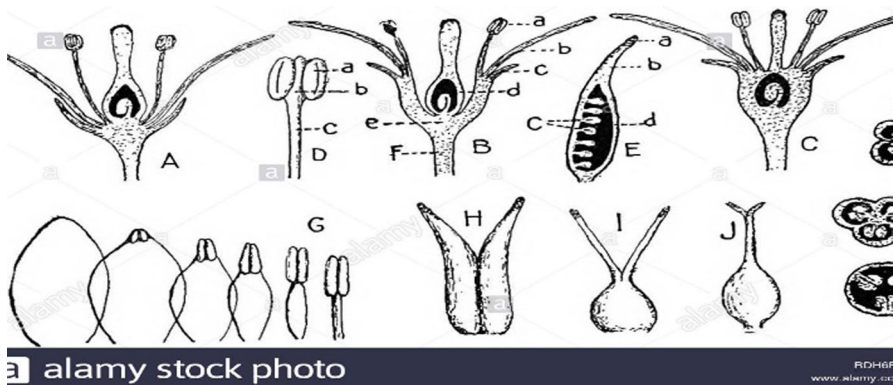
¹⁷ In PI Wittgenstein doesn’t mention Goethe. Yet, all the passages about family resemblance and the ones immediately afterwards, namely the ones on the conception of philosophy, are very similar to the passages that we find in Waismann’s PLP, and in some cases even identical. Furthermore, in *Remarks on Colour* Goethe is constantly mentioned by Wittgenstein. While, as we will see, Wittgenstein was somewhat critical of Goethe’s ideas on colors, which in turn were connected to Goethe’s ideas in MP, he was also clearly interested in using them for his own purposes.

¹⁸ Andronico (1998) is a key text on Wittgenstein and the morphological method. Also relevant to the present paper is Baker and Hacker (2005, chapter 15). Other important explorations of the connections between Wittgenstein and Goethe are Schulte (1990), Monk (1990, pp. 303–4, 509–12, 561–3), Rowe (1991), McGuinness (2002), and the essays contained in Breithaupt et al. (2003).

writes: “Nature does not create a new organ ...; it merely gathers and modifies the organs we are already familiar with, and thereby comes a step closer to its goals”. (MP, 30; cf. p. 100). More specifically, in *The Italian Journey* (1786–1788, published in 1886). Goethe explains how he arrived at the idea of a primal element, from which all plants and their organs originate. While walking in the Public Gardens of Palermo, he says (Goethe, 1962: 366), “it came to me in a flash that in the organ of the plant which we are accustomed to call the *leaf* lies the true Proteus who can hide or reveal himself in all vegetal forms”.

Why did this escape notice, though? Because “Nature masks the resemblance to the leaf But this similarity will not escape our attention if we know how to follow it carefully through all its transitions. (MP, 70). Thus, it is crucial that we train our eyes to follow these “sensuous transformations”—as Waismann calls them (PLP, 81). That is, “it is crucial that we thoroughly observe and compare the different stages nature goes through in the formation of genera, species, and varieties, as well as in the growth of each individual plant” (MP, 92).

Since adopting a morphological method is not so much a matter of being convinced by argument as of looking at things differently,¹⁹ so as to notice aspects of them that we were largely oblivious to, because they are constantly before us, it is important to train our minds (and eyes) to this different way of looking at things. So, here is an example:



If we focus on the formation of the stamen (G), we clearly see that at first the organ is a leaf, which, through intermediate stages, becomes the stamen. If we looked only at the initial and final stages, we would not see these connections and we could not imagine that the stamen results from the modification of the leaf—whence the importance of attending to the intermediate links. The *Metamorphosis*’s goal is to clarify the laws by means of which these transformations take place, to be able to predict, or even invent, based on such a schema, all possible plants and organs.

Once again, it is necessary to observe carefully and to compare. Everything lies open to the view, yet we have to train ourselves to see these connections between

¹⁹ Waismann (1968) is very explicit about that.

apparently disparate phenomena; nothing needs to be explained by reference to hidden causes and processes. Nothing is hidden from the view. All we need to do is learn how to see things aright. “Aright” in this case means: seeing similarities and differences.

Finally, Goethe claims that these similarities (and differences) are objective, or in the phenomena themselves.²⁰ By contrast, as we have mentioned and will further see in §3, for Wittgenstein the morphological method must be used to account for most concepts which are of philosophical relevance, such as MEANING, TRUTH, KNOWLEDGE and UNDERSTANDING, rather than for natural phenomena such as plants and light.

4 Back to family resemblance and surveyable (re)presentations: knowledge and understanding

Wittgenstein’s discussion of family resemblance and the example of the concept GAME are clearly inspired by Goethe. Furthermore, the passage from Waismann, in PLP, in which he mentions Goethe, is placed in between parts of the book that deal with the notions of language-games and family resemblance, on the one hand, and those that contain metaphysical pronouncements, on the other.

As mentioned, however, there is an important difference between Goethe’s original views and their reception by Wittgenstein and Waismann. Namely, while the former was interested in understanding natural phenomena, such as plants, the animal kingdom, light, etc., the latter applied them to *concepts* and utilized them to develop a certain conception of philosophy.

Indeed, Wittgenstein explicitly criticized Goethe. In the *Remarks on Colour*, he writes: “Goethe’s theory of the origin of the spectrum *isn’t* a [scientific] theory ... at all. *Nothing* can be predicted by means of it. It is, rather, a vague schematic outline, of the sort we find in James’s psychology. There is no *experimentum crucis* for Goethe’s theory of colour” (RC §70). For Wittgenstein, Goethe’s theory of colors is best re-interpreted as a theory of *color concepts*; not of colors’ origin, but of color concepts’ internal relations and, therefore, a “grammar”, in Wittgenstein’s sense of the term.²¹ The best use we could make of Goethe’s *Metamorphosis* is then to “metamorphose” it in a *morphology of concepts*.

Now, the interesting point is that the concepts which are the object of philosophical analysis are, for Wittgenstein, family resemblance ones. That is, concepts such

²⁰ In a *Letter to Herder* Goethe (1962, pp. 310–311; emphasis added) writes:

The Primal Plant is going to be the strangest creature in the world, which Nature herself shall envy me. With this *model* and the key to it, it will be possible to go on forever *inventing* plants and know that their existence is *logical*; that is to say, if they do not actually exist, they could, for *they are not the shadowy phantoms of a vain imagination*, but possess an *inner necessity and truth*. The same law will be applicable to all other living organisms.

²¹ Examples of grammatical remarks concerning colors, according to Wittgenstein, are “White is lighter than brown”, “An object cannot be of two different colors all over its surface at the same time”, etc. They should not be read as metaphysical claims about colors, but about permitted or forbidden combinations of color concepts.

AS MEANING,²² TRUTH,²³ BELIEF,²⁴ KNOWLEDGE,²⁵ UNDERSTANDING²⁶ (to mention only some core concepts in epistemology), are determined by the use of the corresponding words in ordinary language. Moreover, such a use isn't governed by fixed rules, or by definitions. Thus, the proper philosophical analysis of such concepts can—and should—limit itself to exploring the use of these words, which is governed by different criteria. Criteria are not then to be thought of as necessary and (possibly) jointly sufficient conditions, operative at each particular node. Rather, they are like “hooks” which guide the use of the relevant words only in specific circumstances, and yet, even in those circumstances, may not uniquely determine what falls under the concept.²⁷

Let us then apply this distinctive way of doing conceptual analysis to KNOWLEDGE and UNDERSTANDING.

4.1 The case of knowledge

An interesting aspect of the idea of family resemblance is that in some cases the same word is actually used in rather different ways. To take an important example from Wittgenstein, consider the use of “I know” (cf. PI §78):

²² In PI (§§275–278) Wittgenstein provides examples of what he calls the “primary” and the “secondary” meaning of a word. While, roughly, the former consists in the use of a word in the language (PI §43), the latter consists of the associations which a word elicits (e.g. “Wednesday is fat” and “Tuesday is lean”). Appreciating the secondary meaning of a word, which is not a metaphorical meaning for Wittgenstein, may lead to appreciating the significance of a word in a given context, thus providing a *trait d'union* between the understanding of the meaning of a word and the interpretation of its significance for instance in a poem.

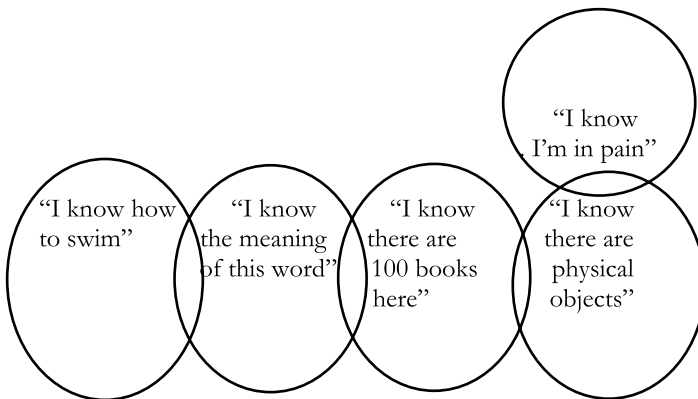
²³ Arguably, after the *Tractatus*, in which Wittgenstein had maintained a correspondence theory of truth, he endorsed a pluralistic account of truth, by adopting an epistemic account and a deflationist one, depending on the kind of proposition at issue. For an elaboration, see Wright (1985, 1992) and Coliva (2022).

²⁴ The various uses of “belief” are examined at length in PI. For an elaboration of a pluralist account of belief, see Bilgrami 2012, and Coliva (2016, especially chapter 1).

²⁵ See PI (§78). OC can be seen as an investigation into different uses of “I know”. See in the following for a brief overview.

²⁶ See PI (§§150, 182, 531–532). See in the following for a brief overview, inspired by some of Wittgenstein's remarks.

²⁷ Thus, Wittgenstein's form of pluralism strongly differs from Carnap's. To put it succinctly, for Carnap, each node or link will have to be defined by providing a specific set of necessary and jointly sufficient conditions. If there isn't even partial overlap, then, these “sub-concepts” will in fact be different and unrelated and this will raise the problem of why they should all be considered to fall under the same overarching concept. This problem doesn't arise on a family-resemblance account because the connection between at least each pair of links or nodes will ensure that they all fall under the same overarching concept, which is given by the totality of such related links. Cf. fn. 3.



In some cases, it refers to a practical, hardly verbalizable ability, like in “I know how to swim”; in some other cases it still refers to an ability, such as the ability of using words appropriately, yet is often accompanied by the ability to explain their meaning—that is, their use, according to Wittgenstein. In other cases, it refers to an epistemic relationship which obtains between a subject and a proposition or a fact, like when we say “I know that there are 100 books on these shelves”, as the result of having carried out some kind of investigation. In that case, having evidence in favor of the proposition which is said to be known is crucial and one should be prepared to exhibit it, if requested. Furthermore, at least when the proposition that is said to be known is empirical, one’s evidence is always defeasible, according to Wittgenstein. That is, further information could show that the proposition in question was in fact not known (OC 12). Finally, there are cases that, while resembling the previous ones in expressing the obtaining of an epistemic relationship between a subject and a proposition—seemingly of an empirical nature –, are distinguished by the fact that the subject’s evidence supporting the proposition is either no stronger than the proposition itself or circularly relies on taking for granted the very proposition in question.

This is in fact the case with “I am in pain” and “There are physical objects”, for Wittgenstein.²⁸ In the former case, our evidence for the self-ascription of knowledge is the same as for the avowal of pain. “I know”, therefore, has merely a grammatical role, as it reminds us that in the language game with sensations, we accord subjects authority with respect to their sensations. In the latter case, in contrast, our

²⁸ This is not the place to defend or even to expound on Wittgenstein’s account of the grammatical use of “I know” with respect to one’s own occurrent sensations (and possibly other kinds of mental state), or with respect to Moore’s truisms and the premises of his proof of an external world. I have done so on multiple occasions, see Coliva (2016, 2021a). This is also strictly irrelevant to the point being made here. Recall that the main aim of this paper is not to defend a specific morphological account of KNOWLEDGE or UNDERSTANDING, but to make room, conceptually, at the metaphilosophical level, for such an account – whence “prolegomena” in the title. Thus, even if one objected to the grammatical use of “I know”, there would still be enough nodes in the use of “I know” to justify a family resemblance account of KNOWLEDGE.

mind-dependent experiences can be brought to bear onto the truth of beliefs about specific, mind-independent objects, like “I am typing on a computer right now”, only by taking for granted that there are physical objects.²⁹ Once again, “I know” in that connection serves a grammatical function (OC 58) and, according to Wittgenstein, could safely be replaced with “it is certain” (OC 194, 203, 270), “it is my unshakable conviction” (OC 103), or “it stands fast for me (and many others)” (OC 116). And in these cases, we think that the possibility of a mistake is “logically excluded” (OC 194) and that we “could not accept any experience as proof to the contrary” (OC 360).

So there are at least four different but intertwined uses of “I know”³⁰:

- K1) Know-how without verbal explanation;
- K2) Know-how with verbal explanation;
- K3) Know-that with defeasible evidence;
- K4) Grammatical use of “I know”.

Once we arrange all these cases alongside one another, we obtain a “surveyable (re)presentation” (*übersichtliche Darstellung*)³¹ (PI §122) of our concepts, e.g. KNOWLEDGE. For Wittgenstein, the notion of “surveyable representation” is of “fundamental significance” (ibid.), since “[i]t characterizes the way we represent things, how we look at matters” (ibid.); and is in fact a ‘*Weltanschauung*’ (ibid.).

Similarly, Waismann, in PLP (80), after presenting Goethe’s ideas, writes: “What then *is* the problem solved by this idea? It is the problem of *synoptic presentation*” (emphasis added). He continues: “Goethe’s aphorism ‘All organs of plants are leaves transformed’ offers us a plan in which we may grasp the organs of plants according to their similarities as if around the same natural centre” (PLP, 81)—namely, the leaf, as we saw.

Furthermore, philosophical misunderstandings, such as the Cartesian account of the mind, or Moore’s account of common sense truisms, occur, according to Wittgenstein, when some features of one of the links (especially (K3) and (K4), in these cases) are mixed up.³² For instance, we think of our knowledge of our own sensations as based on empirical evidence (K3) while also being certain and beyond doubt (K4), and are then led to postulate that it is grounded in introspection, and in luminously—that is, infallibly—seeing—with something like a mind’s eye—our own sensations. Similarly, if one conflated link (K1) and (K3), assuming that practical

²⁹ I have defended this claim in Coliva (2015). See also Wright (2004).

³⁰ Obviously, this is just an initial list, useful for expository purposes. Other cases of knowledge that should be considered in a fuller account, would be knowledge-who and knowledge-why, at least.

³¹ The expression *übersichtliche Darstellung* has been variously translated, ranging from “perspicuous representation” to “synoptic presentation”, via the currently official translation of the *Philosophical Investigations*, i.e., “surveyable representation”. Both terms are problematic. *Darstellung* is often contrasted with *Vorstellung* and used to attenuate the realistic implications of the latter, by creating an opposition between presentation and re-presentation. Moreover, *übersichtliche* appears to have several connotations, ranging from the ones connected to perspicuity and clarity, to the ones connected to the possibility of embracing in one blink, as it were, all the uses of a given word, via the ones connected with the idea that one could embrace them as if from a bird’s-eye point of view (PLP, 60).

³² For a discussion of the Cartesian and the Moorean misunderstandings from a Wittgensteinian point of view, see Coliva (2016) and Coliva (2015), respectively.

knowledge requires a grasp of a (set of) proposition(s), that explain the ability in question, one would quickly be led to the problematic conclusion that there must be a tacit understanding of very complex rules, which would have to be represented in the mind.³³ Conversely, if one were to conflate links (K1) and (K3) by thinking that knowledge—that ultimately comes down to an ability, one would likely conceive of it as the result of the operations of a reliable method, which allows one to perform certain tasks—e.g. recognizing an object, or telling the temperature (like in *Truetemp* cases), or telling the sex of a chicken—with the likely result of opening the door to myriads of counterexamples. That is, to cases where the method is operative, it gives the correct verdict, and yet we would likely resist attributing knowledge to the subject. Arguably, the latter reaction would depend on requiring more for knowledge than just the ability to φ —no matter whether the ability in question is purely recognitional, or to tell the right temperature, or to form true beliefs in barn-façade county. If what more is required is a conclusive reason or an understanding of why things are such-and-so, this would be based on the conflation between the criteria for practical knowledge and (full) propositional knowledge, or, to put in Ernest Sosa’ terms, between “animal” and “reflective” knowledge. The good news is that if a pluralist framework is endorsed, then *Truetemp* and barn-façade cases would not be counterexamples to reliabilism *tout court*, but only to its extension to all cases of knowledge. That is, in many cases we are happy to grant subjects knowledge if they can execute a task or form a true belief thanks to the operation of reliable methods. Yet, this is entirely compatible with the fact that, in many other cases, we require more, such an understanding of why that belief is correct, with the concomitant ability to make such reasons explicit. Furthermore, a pluralist framework would stand opposed to accounts of knowledge, in particular of knowledge-how, that aim to explain it in terms of knowledge-that, such as Stanley and Williamson (2001). For, on a family resemblance account, no link in the chain is more fundamental than any other one, and there is no pressure to reduce the multiplicity of different instances of knowledge in the name of an ideal of theoretical unity.

4.2 The case of understanding

Here’s a tentative application of the morphological method to the case of UNDERSTANDING. As mentioned in the third quote in ex ergo, “the criteria we accept for ... ‘understanding’, are much more complicated than might appear at first sight” (PI §182), and they are entangled with the criteria for knowledge ascription. The following should not be taken as a definitive version of a family-resemblance account of UNDERSTANDING, but as an initial one subject to modifications and improvement. To repeat, my main aim in this paper is merely to make a *prima facie* case for re-orienting the way of approaching these debates in epistemology, and to draw out the metaphilosophical consequences of a pluralist account inspired by the notion

³³ This is quite evident in Chomskyan accounts of syntax. I have discussed this example at length in Coliva (2018).

of family-resemblance and by Wittgenstein's considerations regarding our leading concepts.

As a first stab, let us look at a family-resemblance account of understanding relative to linguistic meaning.

LU1) Understanding words or sentences in a given language: being able to use them and to respond appropriately to someone else's use of them; \approx know-how

LU2) Understanding words or sentences in a given language: being able to explain the meaning of those words and sentences; \approx know-that

LU3) Understanding words and sentences in special contexts, e.g. poems: being able to grasp and possibly explain the significance of those words in those occurrences, often by recruiting the ability to grasp words' "secondary meaning"; \approx Know-that, possibly involving seeing-as, and/or interpretation.

LU4) Understanding words or sentences in a foreign language: being able to translate to and/or from that language, often accompanied by the ability to explain their meaning and possibly their significance in context; \approx know-how, possibly involving know-that, and/or seeing-as, and/or an interpretative component.

LU5) Understanding words or sentences in a given language via knowledge of their etymology³⁴: knowledge of etymology may give one an understanding of a new word in one's own language or even in a foreign one, and/or may enhance such an understanding; \approx Know-that, via know-why.

To repeat, this list isn't meant to be exhaustive, and the criteria operative at various nodes may well have to be refined. Yet, it is to be stressed that these aren't necessary and sufficient conditions, but just "hooks"—that is, parameters—which are *typically* employed, in the relevant contexts, to determine if someone does or doesn't understand the meaning of a given word or sentence.

Notice, moreover, that (LU1) being able to use and respond appropriately to someone else's use of words and sentences in a given language isn't a minimal condition that any form of linguistic understanding should satisfy. For instance, if one translated only from Ancient Greek or Latin into a modern language, one could certainly do it proficiently—and thus have linguistic understanding (LU4)—without being able to use either of these languages, let alone respond appropriately to an AI-simulated use of them, say. As is well-known, for instance, the pronunciation of those languages was different from the way we now read words and sentences in those languages, and there was surely a huge difference, from a grammatical point

³⁴ For example, knowledge of the etymology of several medical terms may provide and/or enrich an understanding of those terms in one's own or even in a foreign language, which one may not master beyond the understanding of these words. For instance, knowing that "hysteria" and "hysterectomy" derive from the word for "uterus" in Ancient Greek, may provide an understanding of those terms in one's language, if one is a native speaker of English, or in a foreign language, if one isn't (and even if one has limited understanding of the rest of that language). It may also provide one with a grasp of why, for millennia, hysteria was considered a women disease. I have discussed this case at length in Coliva (2025).

of view, between the way those languages were spoken daily, and the kind of “high” texts which are typically translated by students in Classics departments.

Furthermore, it is evident that different subjects may have more or less linguistic understanding depending on, roughly, how many nodes they can “check”.

Finally, it would normally be considered preposterous to hold that cases such as (LU1) should be subsumed under (LU2), or that the latter are more fundamental than the former. After all, kids and many adults are only or mostly capable of (LU1). Still, philosophers and linguists have been tempted by that route, and have then thought of (LU1) as undergirded by implicit or tacit knowledge of the meaning–thought–of as a definition, or at least a rule for the employment of a given word (LU2).³⁵

Now, let us return to an even more tentative family-resemblance account of UNDERSTANDING, not confined to the case of linguistic understanding.

U1) Understanding (e.g. in the scientific/empirical realm): *knowledge of efficient causes (explanation)*; ≈ Know-that

U2) Understanding (e.g. in the realm of individual psychology and social phenomena): *knowledge of final causes/reasons*; ≈ Know-why

U3) Understanding (e.g. in mathematics): *being able to follow the steps in a proof/to connect areas of mathematics to produce a proof/to “see”/“grasp” how to continue a series/a pattern; being able to manipulate a diagram*; ≈ Know-how (possibly involving seeing-as) and knowledge-that

U4) Understanding (e.g. a theory): *being able to apply the theory and/or to explain it, possibly adjusting the explanation to different audiences*; ≈ Know-how and/or know-that with a discursive/translational component.

U5) Understanding (e.g. in the history of philosophy/literature/art): *being able to make sense of a work of art/an obscure passage/part of someone else’s work*; ≈ Know-how with an interpretative component that enhances consistency and has fruitful consequences.

U6) Understanding (e.g. someone else’s mind; a foreign culture): *being able to make sense of a different culture/mind-set by “placing oneself in someone else’s shoes”*; ≈ Empathy (*Einfühlung*) with a simulative component, sometimes accompanied by knowledge-why.

U7) Understanding (e.g. in art/poetry/music): *grasping the significance of the work of art/poem/musical piece by having the right kind of emotion/reactive attitude*; ≈ Empathy

U8) Understanding (e.g. a joke, or a pun): *having the right kind of non-cognitive response*.

Once again, this list isn’t meant to be exhaustive. Nor does it aim to present necessary and sufficient conditions at each node, but only criteria we often use in the relevant cases. Thus, for instance, in some cases of artistic understanding we go

³⁵ In Coliva (2018), I have discussed these cases in more detail and have expanded on why, from a Wittgensteinian point of view, going for tacit or implicit rules would be a characteristic sign of philosophical confusion. See also Moyal-Sharrock (2016).

by (U5), in some other cases by (U7), and in some other still, we go by a combination of them. If this is broadly on the right track, to understand our concepts, then, we do not have to find out a hidden essence that all things called ‘knowledge’ or ‘understanding’, have in common. Nor, in a Carnapian fashion, do we have to provide arbitrary—though precise—definitions, which are of relevance at most only in particular contexts, like science or legal discourse (cf. PLP, 183 and PI §68), or which would break down the everyday concept or term into a multiplicity of “sub-concepts”, which would likely end up having nothing in common and would then prompt the question of why they should all be seen as cases of KNOWLEDGE or UNDERSTANDING. Rather, we need to attain a synoptic presentation of the various contexts in which the concepts KNOWLEDGE and UNDERSTANDING are applied and indicate the criteria which are operative in those various circumstances.

5 Morphology and understanding in philosophy

Notice that attaining such a synoptic presentation is very close to the original meanings of the word *theōria* in Greek—namely, a procession of people, or of elements, in this case, *arranged in a particular order*, tasked with a mission, as well as a *viewing*, like a spectator at a theatre or at games.³⁶ Thus, by arranging cases in a specific order we should gain a synoptic view of the width of the concept under examination and of its relationship with neighboring ones, like BELIEF, CERTAINTY and TRUST, in the case of KNOWLEDGE; and KNOWLEDGE, EXPLANATION, ABILITY, SEEING-AS, EMPATHY, in the case of UNDERSTANDING.

Such an arrangement would not give us any explanation—it would not allow us to answer questions such as “Why is this knowledge/understanding?”, or “What is common to all these uses such that they all count as cases of knowledge/understanding?”. Even less would this be at the service of reductionist projects of taking one of these links as fundamental and of then reducing other ones to it, or of explaining them by reference to it. For all links in the chain are on a par and no one is more fundamental than any other.

Importantly, it would deflate certain debates about the nature of understanding. I say “deflate” because, for the most part, these debates would still be relevant but should be taken to highlight possibly contrasting features of different nodes in the overall concept UNDERSTANDING, conceived of as a family resemblance one, rather than as competing accounts of such a concept, monistically understood.

Consider the debate regarding whether understanding entails (or just is) *propositional* knowledge.³⁷ Clearly, in some cases understanding is a form of propositional knowledge, when for instance we understand the efficient causes of phenomena (U1) and thereby possess knowledge of several, interconnected propositions.

³⁶ Cf. Liddle and Scott Greek Dictionary, esp. I, II, III.

³⁷ See Grimm (2006), Khalifa (2013), Greco (2014), who are in favor of the view that the normative profile of understanding is the same as knowledge, and Pritchard (2010), Hills (2016), and Dellsén (2017) for the opposite view.

Whereas in some other cases it isn't at all—like in (U6–U8)—which involve empathy and non-cognitive psychological reactions, rather than a set of knowledgeable propositions, and may require simulation in the form of “placing oneself in someone else's shoes”, which is a psychological ability rather than a form of know-that.

Similarly, it would deflate the debate regarding whether understanding involves abilities or may even just consist in practical ability.³⁸ Again, in some cases it would, like in an unreflective understanding of one's mother's tongue (LU1), whereas it wouldn't in others, like in understanding the efficient causes of complex phenomena.

Connectedly, it would deflate the debate regarding the possibility of transmitting understanding via testimony.³⁹ For if we are considering the kind of understanding that consists in knowledge of a set of interconnected propositions, it may; whereas it may not when we are considering a kind of understanding that entails a practical ability or having a pertinent kind of psychological response. It is all too common for people not to get a joke, no matter how much one tries to explain it to them.

It would also deflate the debate about whether understanding entails truth, i.e. whether it is factive.⁴⁰ For it may—e.g. when we understand the efficient causes of phenomena (U1)—or it may not—e.g. when we understand a joke (U8), where what matters is to have the appropriate kind of reaction to it, rather than grasp of the truth-conditions of “This joke is funny” and their possible ground—that is, “because ...”, followed by an explanation of why the joke is funny, other than “because it makes me laugh”.

In this sense, the morphological method would not be at the service of building a theory of knowledge/understanding, traditionally understood. Yet, it would produce *understanding* of the width of these concepts and of the various criteria that govern uses of “I/S know(s)/understand(s)” in different contexts. In short, we would see unity in difference and difference despite the urge to find a unitary explanation—that is, an explanation that would tell us what each of their nodes have in common with all others, so as to all count as instances of KNOWLEDGE OF UNDERSTANDING.

Note, finally, that this is not the end of theory. Rather, there are two senses of “theory”, or two different ways of going about doing theory. They can be termed the “vertical” and the “horizontal” sense of “theory”.⁴¹ The vertical sense of “theory” is the one exemplified by those projects in metaphysics and epistemology that pursue the foundational aim of identifying the ultimate building blocks of reality or the basic beliefs from which we can derive all others. They are typically monistic, either because they aim to reduce higher-order phenomena to more basic and fundamental ones, or else because they aim at explaining the former in terms of the latter.⁴²

³⁸ See Grimm (2017), Hills (2016), Khalifa (2017).

³⁹ For opposite takes on this issue, see Zagzebsky (2008), Hills (2009), Boyd (2017), Malfatti (2019, 2020).

⁴⁰ See Kvanvig (2003) and Elgin (1991, 2009) for opposite takes on this matter.

⁴¹ Wittgenstein (1993a, p. 92) himself uses the adjective ‘horizontal’ to characterize his way of theorizing in philosophy.

⁴² As we mentioned in §2, Wittgenstein criticized Goethe's application of the morphological method to the study of natural phenomena such as color. In the *Remarks on Frazer's The Golden Bough* (Wittgenstein 1993b), however, he clearly opposed Frazer's positivistic approach to anthropology. While, after the

Projects that exemplify the horizontal sense of “theory”, in contrast, do not pursue any foundational aim, and are pluralistic in that they do not try to reduce allegedly higher-order phenomena to allegedly more basic and fundamental ones, nor do they try to explain the former in terms of the latter. In fact, as we saw in the case of KNOWLEDGE and UNDERSTANDING, each node is on a par with all others, and none is more basic or fundamental.

Finally, we may ask whether these different senses of “theory” are just different ways of looking at things—different models or ways of doing philosophy—that are metaphilosophically on a par, or whether one is better or more correct than the other.

The later Waismann (1968), in “How I see philosophy”, probably inclined towards considering them as on par, for he thought of good philosophy as necessarily intertwined with the development of other disciplines, which are predicated on the vertical sense of “theory”.⁴³

Wittgenstein, as I read him, wasn’t. For, in his view, the proper method of philosophy is necessarily predicated on the horizontal sense of “theory”. This can be evinced from his anti-metaphysical/foundationalist/reductionist/explicative conception of philosophy as well as, as we saw, from his conviction that it is only by not conflating the criteria operative at one link of a given concept with those operative at a different one that we can avoid building philosophical theories which are “only houses of cards” (PI §118). Thus, on his view, we cannot alternate between styles of thinking—between the horizontal and the vertical sense of “theory”—while doing philosophy.

Of course, this might have just been his way of looking at things, *sub specie philosophiae*, but I think it would be interesting and important, for philosophy, to take it seriously and apply it, to see where it may lead us (philosophers). The vertical model has been explored already far and wide and with results that are less than conclusive, at best. If Wittgenstein is right, this is no accident, and at least out of sheer intellectual curiosity, I think we would do well to explore his proposed—horizontal—alternative further.

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Footnote 42 (continued)

Tractatus Logico-Philosophicus, Wittgenstein was certainly opposed to this kind of theorizing in philosophy, and in social sciences such as anthropology, he wasn’t against it in the hard sciences.

⁴³ See Coliva (2021b) for a discussion.

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