

CHAPTER 2: Wittgenstein and forms

2.1. Introduction

Wittgenstein and Russell discussed with great intensity the ideas that Russell was presenting in the *Theory of Knowledge* manuscript. Wittgenstein's attitude appears to have been strongly critical. In a letter to Ottoline Morrell, Russell describes in the following terms a meeting with Wittgenstein on 26 May 1913:

We were both cross from the heat. I showed him a crucial part of what I had been writing. He said it was all wrong, not realizing the difficulties—that he had tried my view and knew it wouldn't work. I couldn't understand his objection—in fact he was very inarticulate—but I feel in my bones that he must be right, and that he has seen something that I have missed. If I could see it too I shouldn't mind, but as it is, it is worrying, and has rather destroyed the pleasure in my writing—I can only go on with what I see, and yet I feel it is probably all wrong, and that Wittgenstein will think me a dishonest scoundrel for going on with it. Well, well—it is the younger generation knocking at the door—I must make room for him when I can, or I shall become an incubus. But at the moment I was rather cross. (Griffin 1992: 446)

Given the date of the meeting, 'what he had been writing' can only be the *Theory of Knowledge* manuscript. Russell was clearly disturbed by Wittgenstein's criticism. In a letter to Morrell of 19 June 1913 he writes:

All that has gone wrong with me lately comes from Wittgenstein's attack on my work—I have only just realized this. It was very difficult to be honest about it, as it makes a large part of the book I meant to write impossible for years to come probably. (Griffin 1992: 448)

And in a letter of May 1916, looking back on that period:

Do you remember that at the time when you were seeing Vittoz I wrote a lot of stuff about Theory of Knowledge, which Wittgenstein criticised with the greatest severity? His criticism, tho' I don't think you realised it at the time, was an event of first-rate importance in my life, and affected everything I've done since. I saw he was right, and I saw that I could not hope ever again to do fundamental work in philosophy. My impulse was shattered, like a wave dashed to pieces against a breakwater. (Russell 1975: 282)

We know that Russell's theory of judgment was one of Wittgenstein's targets. In July 1913, in reply to a letter from Russell now lost, Wittgenstein writes: "I am very sorry to hear that my objection to your theory of judgment paralyses you" (McGuinness 2008: 42).

The nature of Wittgenstein's objections to Russell's theory of judgment has received considerable attention in recent years. We shall discuss it in some detail in the next chapter. What the present chapter focuses on is how Russell's theories of judgment influenced the Tractarian account of representation. I am going to argue that Wittgenstein's central insight was a strategy for overcoming the difficulties that he found in Russell's attempt to solve the mode-of-combination problem with

the help of forms. Seeing Wittgenstein's ideas in this light gives us the best chance of understanding why he once thought that this had to be how language represents the world. I will then consider the limits that Wittgenstein's theory of representation imposes on what can be represented.

2.2. Against Russell's forms

In the pre-Tractarian manuscripts, Wittgenstein discusses extensively the ideas that Russell deployed in connection with the theory of judgment. The tone is mainly critical, but he gives the distinct impression of seeing the appeal of Russell's ideas. His objections seem aimed at positions that he himself might be tempted to adopt. This is the spirit, in particular, of Wittgenstein's discussion of the items that play the role of forms in *Theory of Knowledge*, and of the features that they need to exhibit in order to discharge this task. Wittgenstein is convinced that they cannot play this role but it is undeniable that he is attacking a view that he once considered attractive.

We have a strong indication that Wittgenstein once supported Russell's idea in a letter of 16 January 1913:

I have changed my views on "atomic" complexes: I now think that qualities, relations (like love) etc. are all copulae! That means I for instance analyse a subject-predicate proposition, say, "Socrates is human" into "Socrates" and "something is human", (which I think is not complex). [...] if I analyse the proposition Socrates is mortal into Socrates, mortality and $(\exists x, y) \in_1 (x, y)$ I want a theory of types to tell me that "mortality is Socrates" is nonsensical, because if I treat "mortality" as a proper name (as I did) there is nothing to prevent me to make the substitution the wrong way round. [...]

Propositions which I formerly wrote $\in_2 (a, R, b)$ I now write $R(a, b)$ and analyse them into a, b and $\begin{matrix} (\exists x, y) R(x, y) \\ \text{not complex} \end{matrix}$. (McGuinness 2008: 38)²¹

I am not interested here in the view that Wittgenstein professes to endorse now, nor in the reasons that he offers for his change of mind. We will consider these issues later on. What matters for our immediate purposes is the view that Wittgenstein tells us he used to hold. On this view, the proposition that Socrates is mortal is analysed into Socrates, mortality and $(\exists x, y) \in_1 (x, y)$, and, by analogy, the proposition that A and B are similar would be analysed into A, B, similarity and $(\exists x, y, z) \in_2 (x, y, z)$. The only difference with Russell's view is that where Wittgenstein used $(\exists x, y) \in_1 (x, y)$ and $(\exists x, y, z) \in_2 (x, y, z)$, Russell used $(\exists x, \phi) \phi(y)$ and $(\exists x, y, \rho) x \rho y$. This is no doubt an important difference.²² However, there are also substantial similarities between Russell's view and the view Wittgenstein used to hold. In both cases, the proposition that Socrates is human is analysed into

²¹ The new analysis is strongly reminiscent of Frege's idea that each judgeable content includes an unsaturated constituent. Wittgenstein had visited Frege in December 1912 (McGuinness 2005: 164), and this change of mind may have been prompted by this visit. In Chapters 4 and 5 we shall consider in some detail Frege's influence on some central aspects of the Tractarian account of representation and reality.

²² See, in this connection, a passage we have already quoted: "Take, for example, the proposition 'Socrates precedes Plato'. This has the form of a dual complex: we may naturally symbolize the form by 'xRy', where we use a different sort of letter for the relation, because the difference between a relation and its terms is a *logical* difference" (Russell 1984: 98).

Socrates, mortality and a fact in which the positions of Socrates and mortality are existentially generalised. And the proposition that A and B are similar would be analysed into A, B, similarity and a fact in which the positions of A, B and similarity are existentially generalised. Furthermore, Wittgenstein tells us, concerning the new view, that $(\exists x) P(x)$ and $(\exists x, y) R(x, y)$ are not complex. I think we can confidently infer that he accorded the same treatment to $(\exists x, y) \epsilon_1(x, y)$ and $(\exists x, y, z) \epsilon_2(x, y, z)$. This, as we've seen, was Russell's view concerning $(\exists x, \phi) \phi(y)$ and $(\exists x, y, \rho) x \rho y$.

However, a few months later these views came under attack. Wittgenstein's first target is the idea that full existential generalisations are simple. He addresses the point in the "Notes on Logic":

It is easy to suppose that only such symbols are complex as contain names of objects, and that accordingly " $(\exists x, \phi). \phi x$ " or " $(\exists x, y). xRy$ " must be simple. It is then natural to call the first of these the name of a form, the second the name of a relation. But in that case what is the meaning of (e.g.) " $\sim(\exists x, y). xRy$ "? Can we put "not" before a name? (Potter 2009: 276)

The view under attack was, as we saw, explicitly endorsed by Russell in *Theory of Knowledge*, written five months before Wittgenstein's "Notes on Logic", as well as in Wittgenstein's own January letter. Wittgenstein alludes to an argument in support of the view he is attacking: the propositions under discussion have to be simple because they contain no names of objects. This is clearly reminiscent of Russell's own argument for the simplicity of forms, quoted in the previous chapter:

[...] such absolutely general "facts" as "something is somehow related to something" have no constituents, are unanalyzable, and must accordingly be called simple. (Russell 1984: 129)

However, Wittgenstein thinks now that the view is untenable, and offers an argument against it. Focusing on " $(\exists x, \phi). \phi x$ ", he argues that if this expression is simple, then we should think of it as a name (of a form). But this, Wittgenstein argues, cannot be right. For the negation of " $(\exists x, \phi). \phi x$ " makes perfect sense, but the negation of a name is unintelligible. I am not going to discuss the cogency of Wittgenstein's argument.²³ My concern is to highlight Wittgenstein's rejection of Russell's view. The "Notes on Logic" leave no doubt of this:

Propositions are always complex even if they contain no names. (Potter 2009: 285)

The issue is picked up again in the *Notebooks*²⁴ in October 1914, with another clear reference to Russell's discussion in *Theory of Knowledge*:

We might also say that our difficulty starts from the completely generalized proposition's not appearing to be complex.—

It does not appear, like all other propositions, to consist of arbitrarily symbolizing component parts which are united in a logical form. It appears not to HAVE a form but itself to be a form complete in itself. (Wittgenstein 1979: 18)²⁵

²³ A passage of *Theory of Knowledge* may be an echo of this argument: "Why, if pure forms are simple, is it so obviously inappropriate to give them simple proper names, such as John and Peter?" (Russell 1984: 130)

²⁴ Wittgenstein's *Notebooks* are three manuscript books of philosophical remarks dated from August 1914 to January 1917.

Six days later we find the passage that produced the following section of the *Tractatus* (Wittgenstein 1979: 22):

5.5261 A fully generalized proposition, like every other proposition, is composite. (This is shown by the fact that in $(\exists x, \phi). \phi x$ we have to mention 'ϕ' and 'x' separately. They both, independently, stand in signifying relations to the world, just as is the case in ungeneralized propositions.)

In sum, from the "Notes on Logic" to the *Tractatus*, Wittgenstein finds the idea that Russell's forms are simple completely untenable.

Wittgenstein is also concerned with Russell's idea that the full existential generalization of an atomic proposition cannot be false. He clearly sees the appeal of the idea that these propositions are tautologies, but he comes to the conclusion that the view is unacceptable:

Now, however, it looks as if exactly the same grounds as those I produced to shew that $(\exists x, \phi). \phi x$ could not be false would be an argument shewing that $\sim(\exists x, \phi). \phi x$ could not be false; and here a fundamental mistake makes its appearance. For it is quite impossible to see why just the first proposition and not the second is supposed to be a tautology. But do not forget that the contradiction " $p \cdot \sim p$ " etc. etc. cannot be true and is nevertheless itself a logical structure. (Wittgenstein 1979: 13)

Another view that he is initially attracted to is the idea that completely general propositions are not really about the world:

It is clear that we can form all the completely general propositions that are possible at all as soon as we are merely given a *language*. And that is why it is scarcely credible that such connections of signs should really say something about the world. (Wittgenstein 1979: 12)

And the next day:

The proposition is supposed to give a logical model of a situation. It can surely only do this, however, because objects have been arbitrarily correlated with its elements. Now if this is not the case in the completely general proposition, then it is difficult to see how it should represent anything outside itself. (Wittgenstein 1979: 12-13)

However he comes to the conclusion that this view is mistaken. A completely general proposition, like a singular proposition, represents things in the world as being a certain way:

The possibility of inferring completely general propositions from material propositions—the fact that the former are capable of standing in *meaningful* internal relations with the latter—shews that the completely general propositions are logical constructions from situations. (Wittgenstein 1979: 16)

And again:

²⁵ Compare (Russell 1984: 114), on 'Something has some relation to something': "At first sight it seems to have a structure, and therefore not to be simple, but it is more correct to say that it *is* a structure".

If a completely generalized proposition is not completely dematerialized, then a proposition does not get dematerialized at all through generalization, as I used to think.

Whether I assert something of a particular thing or of all the things that there are, the assertion is equally material. (Wittgenstein 1979: 17)

What the proposition “ $(\exists x, \phi). \phi x$ ” says is that there exist a predicate and an individual such that the individual instantiates the predicate. Whether this is how things stand in the world seems a thoroughly contingent matter, and the possibility of representing an object as instantiating a predicate cannot depend on whether this is how things stand in the world. But this unacceptable dependence is unavoidable if fully existentially generalised propositions are involved in representation:

I thought that the possibility of the truth of the proposition ϕa was tied up with the fact $(\exists x, \phi). \phi x$. But it is impossible to see why ϕa should only be possible if there is another proposition of the same form. ϕa surely does not need any precedent. (For suppose there existed only the two elementary propositions “ ϕa ” and “ ψa ” and that “ ϕa ” were false: Why should this proposition make sense only if “ ψa ” is true?) (Wittgenstein 1979: 17)

The claim that the possibility of the truth of the proposition ϕa is tied up with the fact $(\exists x, \phi). \phi x$ is clearly a version of Russell’s thought that the latter is involved in understanding the former. If this thought were correct, then ϕa could be understood only if the complex $(\exists x, \phi). \phi x$ existed—if the fact obtained. This is not a problem for Russell, since, as we’ve seen, he holds that “falsehood is logically impossible in these cases” (Russell 1984: 141). But Wittgenstein has come to see this position as unacceptable. He makes the irresistible point that the fact $(\exists x, \phi). \phi x$ would only obtain if for some predicate P and some object c , the proposition Pc were true.²⁶ This means that on Russell’s view the possibility of understanding ϕa depends on the truth of another proposition of this form.²⁷ But this dependence is unacceptable: “ ϕa surely does not need a precedent”.

The point is underscored by the situation that Wittgenstein envisages in the bracketed passage at the end of the quote. If Pa and Qb were the only subject-predicate propositions, and Pa were false, then since Pa would make sense only if $(\exists x, \phi). \phi x$ existed, Pa would make sense only if Qb were true.

The difficulty is raised again seven days later:

This is the difficulty: How can there be such a thing as the form of p if there is no situation of this form? And in that case, what does this form really consist in? (Wittgenstein 1979: 21)

And an earlier passage seems to give compressed expression to a related point:

²⁶ The interpretation of this passage that I am recommending requires reading “another proposition of the same form” as “another *true* proposition of the same form”. On this point see (Pears 1977), whose reading I am following here.

²⁷ The complex $(\exists x, \phi). \phi x$ would also exist if Pa was true, but if propositions had to acquire sense in this way, the falsehood of the proposition would be ruled out.

If the existence of the subject-predicate *sentence* does not show everything needful, then it could surely only be shewn by the existence of some particular fact of that form. And acquaintance with that fact cannot be essential for logic. (Wittgenstein 1979: 3)

As we have seen, on Russell's account of understanding the subject needs to be acquainted with the form of a proposition she understands. However, as the argument that we have just presented shows, acquaintance with the subject-predicate form would require the existence of a particular fact of that form. And this is not a plausible prerequisite for understanding of the original proposition.

In *Theory of Knowledge* there is a clear allusion to this point:

It seems plain that "aRb" has "meaning" provided R is the right sort of entity, and that the question whether R is the right sort of entity depends upon its logical character, and not upon the more or less accidental question whether instances of it actually occur. [...] a given R may enter into *propositions* of the form "aRb", even if there are no complexes of this form [...]. In such a case, the proposition "something has the relation R to something" will have meaning but be false. Thus this kind of proposition does not have the necessary truth that belongs to propositions such as "something has some relation to something". (Russell 1984: 134)

Here Russell is conceding that the point that I have attributed to Wittgenstein concerning the form of "aRb"—*something has some relation to something*—holds for *something has the relation R to something*: whether it is true or false clearly depends on "the more or less accidental question" whether instances of R actually occur. This circumstance poses a problem for a view according to which *something has the relation R to something* is involved in the proposition "aRb". Notice that this is the view that, according to the letter we quoted above, Wittgenstein had come to adopt by January 1913. The problem is that we want to say that a proposition of the form "aRb" makes sense even if R has no instances. But if "aRb" is analysed as involving *something has the relation R to something*, then if R had no instances, there could be no propositions of the form "aRb". I am suggesting that this is exactly the problem that Wittgenstein has raised with respect to the involvement of forms in Russell's account of understanding. However, Russell is convinced that the problem doesn't arise for forms, since, unlike *something has the relation R to something*, *something has some relation to something* is a necessary truth. Hence the involvement of the latter in understanding of "aRb" does not make understanding contingent on whether some binary relation has instances.

Russell's idea that we can be acquainted with forms may also be alluded to in the following passage of the "Notes on Logic", in which Wittgenstein rejects the very idea of identifying *any* items with forms:

There is no thing which is the form of a proposition, and no name which is the name of a form. Accordingly we can also not say that a relation which in certain cases holds between things holds sometimes between forms and things. This goes against Russell's theory of judgment. (Potter 2009: 282)

My suggestion is that the relation that figures in the second sentence of the passage is Russell's relation of acquaintance. Then Wittgenstein's point would be that Russell's theory should be rejected on the grounds that it requires acquaintance with forms, and this is impossible.

The final passage that I want to consider takes issue with the very idea that forms are involved in propositions:

The reality that corresponds to the sense of the proposition can surely be nothing but its component parts, since we are surely *ignorant of everything* else.

If the reality corresponds to anything else as well, this can at any rate neither be denoted nor expressed; for in the first case it would be a further component, in the second the expression would be a proposition, for which the same problem would exist in turn as for the original one. (Wittgenstein 1979: 31)

On the reading of this passage that I recommend, Wittgenstein is taking issue with the view that what corresponds to the sense of the proposition is its component parts *and* its form. The argument in the second paragraph is a reductio of the involvement of forms in the sense of propositions. From the assumption, towards a contradiction, that a form is involved in the sense of a proposition, a dilemma arises. Either it is an object or it is a state of affairs. But both horns lead to difficulties. If, on the one hand, it is an object, then it will have to be regarded as a further constituent of the represented state of affairs. But this, as we have seen, was rejected by Russell as leading to an infinite regress. If, on the other hand, the form is a state of affairs, then its apprehension will have to have the character of understanding, leading to a different infinite regress—the one that Russell had tried to avoid with the demand that “understanding of the pure form ought to be simpler than that of any proposition which is an example of the form” (Russell 1984: 129).²⁸ I shall not try to spell out the argument in detail. The point I want to emphasize is that, for Wittgenstein, Russell has failed in his attempt to avoid the dangers that he had recognised for the introduction of forms in the theory of understanding.

2.3. Wittgenstein's forms

As we saw in the previous chapter, Russell's forms were an essential ingredient of his 1913 solution to the mode-of-combination problem. In rejecting these entities, Wittgenstein is rejecting Russell's solution to the problem. Nevertheless, it would be hard to understand why Wittgenstein devoted so much effort to the assessment of Russell's forms if he didn't think the issue was important. This suggests, first, that Wittgenstein took the mode-of-combination problem seriously and, second, that he saw some merit in Russell's proposal: it might just work if only we could find entities to play the role of forms in the account. I am going to argue that this is in fact the situation. One of the central ingredients of the theory of representation put forward in the *Tractatus* is a solution to the mode-of-combination problem. Furthermore, Wittgenstein's solution to the problem incorporates a central idea of Russell's proposal.

I have argued that one of the central aspects of Russell's solution to the mode-of-combination problem is the idea that each episode of understanding or judgment has to produce a mental complex. Then the way in which the constituents of the represented complex have to be combined

²⁸ See §1.8, above.

with one another (the way things in the world have to be combined with one another to make the judgment or what is understood true) will be determined by the way in which the constituents of the complex produced in thought are combined with one another. Approaching the mode-of-combination problem in this way is intended to block the infinite regress that we face if we try to solve the problem in terms of awareness of a form.

We saw that the simplest version of this general strategy would be to contend that an episode of judgment or understanding produces in thought the represented complex. However, Russell realizes that this is not a viable option: The mind doesn't in general have the power to produce the represented complex, and even if this difficulty could be overcome we would end up with an account of judgment and understanding in which falsehood is ruled out. Russell's solution to this difficulty is to introduce forms as additional relata in the complexes that are produced in thought when we judge or understand.

Now, according to Wittgenstein, the last move of this strategy is not available. The entities that Russell wants to use as additional relata in mental complexes are not up to the task, and nothing else will do the job: "There is no thing which is the form of a proposition". If we accept this result, rescuing Russell's general strategy for dealing with the mode-of-combination problem will require another account of the mental complex that determines the way in which the constituents of the represented complex would have to be combined with one another.

I want to suggest that this is the route that Wittgenstein takes. Faced with the impossibility of invoking forms, he puts forward an alternative account of the combination that determines how the constituents of the represented complex have to be combined with one another. His idea is very simple: an episode of mental or linguistic representation incorporates a complex, just as in Russell's version of the strategy. But whereas in Russell's version the constituents of the representing complex are the constituents of the represented complex plus the form of the represented complex, in Wittgenstein's version the constituents of the representing complex are completely different from the constituents of the represented complex. However, while the representing complex and the represented complex have different constituents, their modes of combination are the same: the way in which the constituents of the represented complex would have to be combined with one another is the way in which the constituents of the representing complex are actually combined with one another. Thus the mode of combination of the representing complex determines the mode of combination of the represented complex. But because the two complexes have different constituents, the existence of the representing complex is in principle compatible with the non-existence of the represented complex. In this way, falsehood can be accommodated. This solution to the mode-of-combination problem is, I submit, the central idea of Wittgenstein's picture theory of representation. The pictures, thoughts and propositions of the *Tractatus* are the representing complexes in the strategy that I have sketched.

2.4. Pictorial representation

The notion of pictorial representation is characterised concisely in the following sections of the *Tractatus*:

2.14 What constitutes a picture is that its elements are related to one another in a determinate way.

2.141 A picture is a fact.

2.15 The fact that the elements of a picture are related to one another in a determinate way represents that things are related to one another in the same way.

We can see this passage as presenting a method for representing things as related to one another in a certain way, including a solution to the mode-of-combination problem. The method consists in using a fact as our representing item. And the reason why the method works is that in a fact its constituents are combined with one another in a determinate way. This is why a picture has to be a fact. We are told (section 2 of the *Tractatus*) that a fact is “the existence of states of affairs”. We shall discuss in more detail later on how the connection between facts and states of affairs is to be understood, but for the purposes of understanding Wittgenstein’s presentation of the picture theory, we can usefully and harmlessly simplify matters by assuming that a fact is an obtaining state of affairs.

Now a state of affairs (2.01) is “a combination of objects (things)”. Hence a state of affairs (and, by our simplifying assumption, a fact) exemplifies a mode of combination:

2.031 In a state of affairs objects stand in a determinate relation to one another.

The constituents of a fact are combined with one another in a certain way. This is what enables them to represent things as combined with one another in a certain way. The way in which the objects in the world are represented as combined with one another is the way in which the constituents of the picturing fact are actually combined with one another. That is, the way in which the objects in the world have to be combined with one another in order for the picture to be correct is *identical* with the way in which the constituents of the picturing fact are actually combined with one another:

2.16 If a fact is to be a picture, it must have something in common with what it depicts.

2.161 There must be something identical in a picture and what it depicts, to enable the one to be a picture of the other at all.

What has to be identical in a picture and what it depicts is the pictorial form of the picturing fact:

2.17 What a picture must have in common with reality, in order to be able to depict it—correctly or incorrectly—in the way that it does, is its pictorial form.

In the *Prototractatus*, pictorial form had been characterized directly as the way in which the constituents of the picturing fact are combined with one another.²⁹ There, the first paragraph of section 2.15 of the *Tractatus*, quoted above, is followed by:

This connexion of the elements of a picture is called its pictorial form.
(Wittgenstein 1971: 2.15101)

²⁹ The text known as *Prototractatus* is a preliminary version of the *Tractatus*. According to Brian McGuinness it was composed between 1915 and 1918 (McGuinness 1989). But see (Kang 2005).

However, the way in which the constituents of a state of affairs are combined with one another is referred to as the *structure* of the state of affairs:

The determinate way in which objects are connected in a state of affairs is the structure of the state of affairs. (Wittgenstein 1971: 2.032)

This terminology is somewhat confusing, since the way in which the constituents of the picture are combined with one another is called its form, but the way in which the constituents of the fact that serves as a picture are combined with one another is called its structure.

In the *Tractatus* the difficulty is resolved. Now both facts and pictures have both form and structure. Thus, for states of affairs, section 2.032 of the *Prototractatus* is replaced with:

2.032 The determinate way in which objects are connected in a state of affairs is the structure of the state of affairs.

2.033 Form is the possibility of structure.

And for pictures, instead of section 2.15101 of the *Prototractatus*, the first paragraph of section 2.15 of the *Tractatus* is now followed by:

2.15 [...]

Let us call this connexion of its elements the structure of the picture, and let us call the possibility of this structure the pictorial form of the picture.

2.151 Pictorial form is the possibility that things are related to one another in the same way as the elements of the picture.

The pictorial form of a picture is the form of the fact it consists in.

Pictorial forms, Wittgenstein tells us, can be of different types:

2.171 A picture can depict any reality whose form it has.

A spatial picture can depict anything spatial, a coloured one anything coloured, etc.

I.e. the constituents of the picturing fact can be combined with one another, e.g., spatially or chromatically. When they are combined spatially, they can represent objects in the world as arranged in that same spatial combination. When they are combined chromatically, they can represent objects as arranged in that chromatic combination.

Let's consider how the proposal would work in specific examples. Suppose that, as a matter of fact, a bottle is behind a cup. Then the fact that the bottle is behind the cup could serve as a spatial picture. Its constituents, the bottle and the cup, are combined with one another in a spatial way—by the relation *x is behind y*. If we now make the bottle stand for, say, a pencil, and the cup for, say, a sharpener, the picture will represent the pencil as being behind the sharpener (see Figure 1). The (spatial) way in which bottle and cup are actually combined with one another in the picturing fact is the way in which the pencil and the sharpener are represented as combined with one another.



Figure 1

Suppose now that as a matter of fact a table is darker than a chair. Then the fact that the table is darker than the chair could serve as a chromatic picture. Its constituents, the table and the chair, are combined with one another in a chromatic way—by the relation *darker than*. If we now make the table stand for a shoe and the chair for a tie, this picture will represent the shoe as being darker than the tie (see Figure 2). The (chromatic) way in which table and chair are actually combined with one another in the picturing fact is the way in which the shoe and the tie are represented as combined with one another.

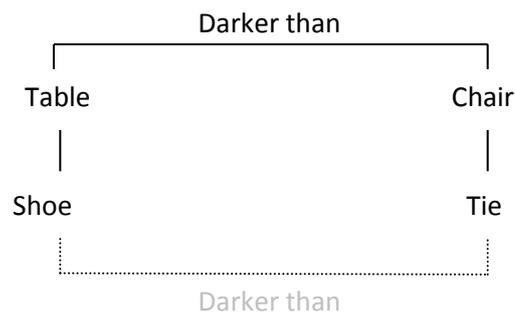


Figure 2

One virtue of this proposal is that it has no problem making room for the possibility of false or incorrect pictures. The bottle is behind the cup, but the pencil may or may not be behind the sharpener. The table is darker than the chair, but the shoe may or may not be darker than the tie.

Wittgenstein displays prominently this feature of the account:

2.173 A picture represents its subject from a position outside it. (Its standpoint is its representational form.) That is why a picture represents its subject correctly or incorrectly.

And again:

2.21 A picture agrees with reality or fails to agree; it is correct or incorrect, true or false.

2.22 What a picture represents it represents independently of its truth or falsity, by means of its pictorial form.

In making this point, Wittgenstein must have in mind a contrast with an alternative account of representation for which falsehood is a problem. I suggest that what he has in mind is Russell's dual-relation theory and the version of the multiple-relation theory in which the constituents of the represented complex are synthesized in thought when we judge or understand. Russell had tried to overcome the shortcomings of this position by introducing forms as constituents of the representing combinations. Wittgenstein came to the conclusion that this strategy couldn't work. His picture theory of representation is his alternative proposal for solving the problem.

Making a fact function as a picture requires singling out the objects that are represented as combined with one another. In some cases, all that's required is that we pair the picturing fact with a collection of objects. Thus, e.g., in order to use the fact that the bottle and the cup are close to each other to represent the pencil and the sharpener as being close to each other, all we need to do is pair the picturing fact with the pencil and the sharpener. However, in other cases this won't do. In order to use the fact that the bottle is behind the cup to represent the pencil as being behind the sharpener, it's not enough to pair the representing fact with the pencil and the sharpener. For this won't tell us whether we are representing the pencil as being behind the sharpener or the sharpener as being behind the pencil. This is, of course, Russell's problem of order.

In order for the picture theory to solve this problem, each constituent of the picturing fact has to be paired with an individual object. This pairing determines which position each object is supposed to occupy in the represented complex. Thus, pairing the bottle with the pencil and the cup with the sharpener will make the fact that the bottle is behind the cup represent the pencil as being behind the sharpener, instead of representing the sharpener as being behind the pencil. Wittgenstein presents these pairings as a central aspect of the proposal:

2.13 In a picture objects have the elements of the picture corresponding to them.

2.131 In a picture the elements of the picture are the representatives of objects.

He refers to these pairings of picture elements with the objects to which they correspond as the *pictorial relationship*:

2.1514 The pictorial relationship consists of the correlations of the picture's elements with things.

Thus the pictorial relationship can be seen as Wittgenstein's solution to the problem of order.³⁰ But I have argued that this problem is not the fundamental motivation for the picture theory. This is provided by the mode-of-combination problem, which Wittgenstein solves with the notion of pictorial form—i.e. with the contention that a picture is a fact that represents objects as combined with one another in the same way in which its constituents are actually combined with one another.

³⁰ I am not claiming that Wittgenstein decided to pair picture constituents with objects instead of pictures with set of objects with the intention of solving Russell's problem. My claim is simply that the need to deal with this problem (and, as far as I can see, nothing else) is what, as a matter of fact, makes the route Wittgenstein takes preferable to the alternative.

2.5. Logical pictures

Wittgenstein now introduces a special kind of pictures—logical pictures, and a special kind of pictorial form—logical form:

2.18 What any picture, of whatever form, must have in common with reality, in order to be able to depict it—correctly or incorrectly—in any way at all, is logical form, i.e. the form of reality.

2.181 A picture whose pictorial form is logical form is called a logical picture.

2.182 Every picture is at the same time a logical one. (On the other hand, not every picture is, for example, a spatial one.)

We can understand these ideas if we reflect on an ambiguity in the notion of the way in which the constituents of a fact are combined with one another. On the one hand, we can analyse the fact that the bottle is behind the cup, as we have done, as having the bottle and the cup as its constituents, which are combined with one another by the relation *x is behind y*. But on the other hand, the same fact can be analysed as having the bottle, the cup and the relation *x is behind y* as its constituents, now combined with one another by the binary-instantiation relation. Notice that the contrast between these analyses corresponds to the contrast that Wittgenstein presented in his letter of January 1913, quoted earlier, i.e. between $R(a,b)$ and $\in_2(a,R,b)$. If we restrict ourselves to facts that have the kind of structure that Russell contemplated for atomic complexes—i.e. n objects combined into a unit by an n -place relation, then every fact will be analysable in both ways. Let me refer to the analysis in which the relating relation is treated as the mode of combination as the *lower-level* analysis, and to the analysis in which the relating relation is treated as one of the constituents as the *higher-level* analysis.

The examples of pictorial representation that we have considered so far use a lower-level analysis of the picturing fact: thus, e.g., in the fact that the bottle is behind the cup, bottle and cup were treated as the constituents of the fact, and the relation *x is behind y* as the way in which the constituents of the fact are put together. Hence when this fact was used as a picture, it represented objects in the world as combined with one another by the relation *x is behind y*.

But the same fact can receive a higher-level analysis. Now the bottle, the cup and the relation *x is behind y* are treated as the constituents of the fact, and the binary-instantiation relation as the way in which the constituents are combined with one another. When the fact is analysed in this way, it can still be used as a picture. Now, in addition to correlating the bottle and the cup with objects, say, with the pencil and the sharpener, as before, we need to correlate the relation *x is behind y* with a relation, e.g. with the relation *x is heavier than y*. Then the pencil, the sharpener and the relation *heavier than* will be represented as combined with one another in the same way in which the constituents of the picturing fact are combined with one another, i.e. by the binary-instantiation relation (see Figure 3). As a result, the pencil and the sharpener will be represented as combined with one another by the *heavier than* relation. In other words, the pencil will be represented as heavier than the sharpener.

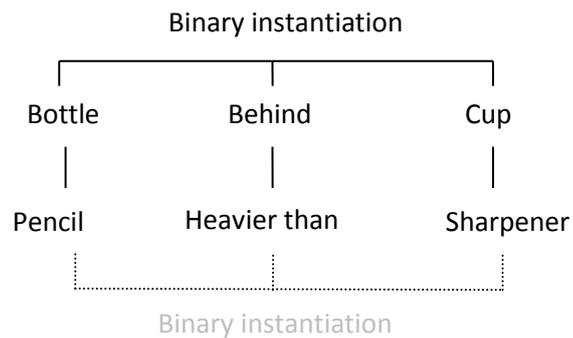


Figure 3

This is how I propose to understand Wittgenstein's notions of logical form and logical picture. The way in which the constituents of a fact are combined with one another when we adopt a higher-level analysis is the logical form of the fact. And when we use a fact as a picture according to its higher-level analysis, we are using it as a logical picture. We can also understand in this way why every picture is at the same time a logical picture. When the fact that the bottle is behind the cup is used as a spatial picture, it represents the pencil and the sharpener as combined with one another by the *behind* relation. But the same instance of picturing can be characterised at the higher level: the pencil, the sharpener and the *behind* relation are represented as combined with one another as the bottle, the cup and (again) the *behind* relation are combined with one another in the picturing fact, i.e. by the binary-instantiation relation. A picture is only logical when the relating relation of the picturing fact is taken to stand for a different relation, as when the fact that the bottle is behind the cup is used to represent the pencil as *heavier than* the sharpener.

Notice that this reading enables us to understand the relationship between the structure and form of a picturing fact and its pictorial structure and form. The form of the fact will be ambiguous between the two levels of analysis, but this ambiguity will not be present in its pictorial form. Which of the two levels of analysis represents its pictorial form will be determined by the level at which its constituents are correlated with things in the world.

This construal of logical picturing faces some serious obstacles. The first problem is that in accepting that a fact can receive a higher-level analysis, we seem to be committing ourselves to the existence of an entity along the lines of a Russellian form that is responsible for combining the constituents of the fact into a unit. If this is right, then it is highly unlikely that Wittgenstein would accept the legitimacy of higher-level analyses, since, as we have seen, he is firmly opposed to the idea that facts are held together by Russellian forms. Hence he wouldn't be able to treat my construal of logical picturing as a legitimate model of representation.

However, higher-level analyses don't need to carry this ontological commitment. In accepting that a fact can receive a higher-level analysis we don't need to commit ourselves to the existence of an entity—the logical form (binary instantiation, in our example)—that is responsible for the unity of the fact. Instead, we could view logical forms simply as common features of different facts, without ascribing to them an independent ontological status or treating them as the source of the unity of facts. As we shall see in Chapter 4, this is precisely the conception of logical form put forward in the *Tractatus*. Hence Wittgenstein can countenance the higher-level analyses required by my construal of logical picturing without reinstating Russellian forms by a different name.

Another obstacle to my construal is the letter of January 1913 already quoted. There, as we saw, he declares having abandoned the analysis of complexes of the form aRb into a, b, R and $(\exists x, y, z) \in_2 (x, y, z)$ (call this the *discarded analysis*) in favour of an analysis into a, b and $(\exists x, y) R(x, y)$. And the discarded analysis sounds very much like what I'm calling *higher-level analysis*. This would count as an objection to my construal of logical picturing if it was possible to provide an alternative construal of the notion that was compatible with the rejection of the discarded analysis. I am going to argue that this is not the case. On the contrary, any plausible construal of the notion will face the same conflict.

Notice, that, as I've just argued, accepting higher-level analyses doesn't force us to accept the ontological commitment to a Russellian form that the discarded analysis appears to carry. But even when we leave this to one side the tension persists. A feature of the discarded analysis of "Socrates is mortal" that Wittgenstein professes to have abandoned is that it treats "mortality" 'as a proper name'. In the case of, say, "A and B are similar", the discarded analysis would treat "similarity" as a proper name. I take it that the general point can be formulated by saying that on the discarded analysis the relational constituent of the represented complex, just as its *relata*, is arbitrarily correlated with one of the constituents of the representing complex.

Clearly this is a consequence of logical picturing, on my construal. When we represent the pencil as being behind the sharpener with a spatial picture consisting in the bottle being behind the cup, the relational constituent of the represented complex is not treated 'as a proper name'. However, when we represent the pencil as being heavier than the sharpener with the logical picture consisting in the bottle being behind the cup the relational component of the represented complex *is* being treated as a proper name. The *heavier than* relation, just as the pencil and the sharpener, is arbitrarily correlated with one of the constituents of the picturing fact.

I want to argue that this conflict with the January 1913 letter cannot count as an objection to my construal of logical picturing because no plausible construal of the notion can avoid it. The reason is that, as we are about to see, Wittgenstein wants to use the notion of logical picturing to explain linguistic representation: propositions are logical pictures. Now suppose that in a proposition representing the pencil as being heavier than the sharpener the *heavier than* relation could not be arbitrarily correlated with a constituent of the proposition. As far as I can see, this could only be achieved if the constituents of the proposition were themselves connected by the *heavier than* relation—if the 'proper name' standing for the pencil were literally heavier than the 'proper name' standing for the sharpener. But this is clearly not how language works. The constituents of propositions only bear to one another a very restricted range of relations—e.g. contiguity, precedence, concatenation, etc. Propositions can represent objects as combined with one another in ways in which the constituents of propositions could not possibly be combined. The only plausible account of how language achieves this is by arbitrarily correlating the relational component of the represented complex with a constituent of the proposition. Hence if, as Wittgenstein asserts, propositions are logical pictures, logical picturing, on any plausible construal, will have to exhibit this feature.

In sum, in the January 1913 letter, Wittgenstein appears to reject the view that the relational component of the represented complex can be arbitrarily correlated with a constituent of the proposition. On my construal of logical picturing, the relational component of the represented

complex is arbitrarily correlated with a constituent of the logical picture. But so long as propositions are logical pictures, any plausible construal of the notion will have to have this consequence. Hence the conflict between logical picturing and the January 1913 letter is a genuine conflict, not generated by my construal of the former. It either represents a tension in Wittgenstein's thought or a change in his views subsequent to writing the letter. I shall not try to adjudicate between these hypotheses.

A similar situation arises concerning the views expressed in the following passage of the "Notes Dictated to Moore":³¹

It is very important to realize that when you have two different relations $(a,b)_R$, $(c,d)_S$ this does *not* establish a correlation between a and c , and b and d , or a and d , and b and c : there is no correlation whatsoever thus established. Of course, in the case of two pairs of terms united by the *same* relation, there is a correlation. This shews that the theory which held that a relational fact contained the terms and relations united by a *copula* (\in_2) is untrue; for if this were so there would be a correspondence between the terms of different relations. (Wittgenstein 1979: 117-18)

On my construal, logical picturing violates the demand expressed here. When we picture the pencil as being heavier than the sharpener with the fact that the bottle is behind the cup, a correlation is established or presupposed between the bottle and the pencil, on the one hand, and the cup and the sharpener, on the other, even though *behind* and *heavier than* are different relations.

However, once again, any plausible construal of logical picturing will have this consequence. As I've just argued, in a logical picture the relational component of the represented complex will have to be arbitrarily correlated with a component of the picturing fact. And yet, it wouldn't count as a picture, in Wittgenstein sense, unless a correlation was established between the remaining constituents of the represented complex and constituents of the picturing fact. Logical picturing, on any plausible construal, cannot satisfy the demand expressed by this passage.

We can now use this account of the Tractarian notion of pictorial representation to throw some light on the claim made in section 2.18, quoted above, concerning logical form and the possibility of depiction. On a natural interpretation of the passage, it claims that there has to be a harmony between the form of reality and the form of the pictures with which we represent it. This demand can then be satisfied in two ways, depending on whether we take reality or our pictures to be the leading partner in the relationship. On the one hand, the passage can be read as claiming that reality has a logical form that our pictures will have to replicate if they are to be able to represent it. On the other hand, the harmony might be secured in the opposite direction. On this reading, our pictures would have a form that limits the reality that they can represent—we can only represent those aspects of reality that share their logical form with our pictures.

I want to suggest that neither of these readings is satisfactory. They both rest on a conception according to which there are two realms—reality and our pictorial representations of it—that need to be harmonised. But this conception is totally alien to the picture theory. In the *Tractatus*, pictures are facts—actual combinations of objects in the world. There can be no question of whether or not

³¹ Wittgenstein moved from Cambridge to Skjolden (Norway) in October 1913. In March 1914 G.E. Moore visited him there. These notes were produced during that visit.

their form coincides with that of reality. The logical form of our pictures is the logical form of reality because our pictures are part of reality.³²

The harmony that 2.18 talks about is the harmony between how things are and how we can represent them as being. A picture is a fact, whose constituents are actually combined with one another in a certain way. It can only depict objects as combined with one another in *that* way. Hence, in general, we can only depict things as combined with one another in ways in which (other) things are actually combined with one another. Only modes of combination that are actual can be represented pictorially. Thus, e.g., if, as Russell thought (but, as we shall see, not Wittgenstein), every (atomic) fact that the world contains consists in the instantiation of an n-place relation by n objects, then we can only represent the world pictorially as consisting of instantiations of n-place relations by n objects. We can represent objects as combined with one another in ways in which *these* objects are not actually combined with one another: false representation is possible. However, we cannot represent objects as combined with one another in ways in which *no* objects are actually combined with one another: illogical representation is impossible.³³

One consequence of this is that Wittgenstein's proposal is open to one of the objections that he raised against Russell's appeal to logical forms: we won't be able to represent a as instantiating P unless there is an object b and a predicate Q such that b actually instantiates Q.³⁴

2.6. The two youths in the fairy-tale, their two horses and their lilies

I have so far taken Wittgenstein literally when he declares that in pictorial representation objects are represented as combined with one another in *the same way* as the constituents of the picturing fact are combined with one another. This rules out pictures in which objects are represented as combined with one another in a way that is different from but correlated with the way in which the constituents of the picturing fact are combined with one another. This restriction appears much less severe once we realize that pictorial representation can take place at the logical level. As we have seen, when we use the fact that the bottle is behind the cup to represent the pencil as heavier than the sharpener we are not violating the restriction. We may not be representing the pencil and the sharpener as combined with one another in the same way in which the bottle and the cup are combined with one another in the picturing fact, but we *are* representing the pencil, the sharpener and the *heavier than* relation as combined with one another in the same way in which the bottle, the cup and the *behind* relation are combined with one another in the picturing fact.

Nevertheless, although the restriction is not as severe as it might have seemed, I want to argue that it is still a central ingredient of Wittgenstein's position. In its absence the mode-of-combination problem would not have been solved. This, as we saw, is a problem that arises for views that construe grasp of the way in which objects are combined with one another in the represented complex in terms of a relation between the subject and an object that represents the requisite mode of combination. Thus consider a view along the lines of the original version of Russell's multiple-

³² See §2.11, below, for an alternative construal of the contrast between realist and idealist readings of the *Tractatus*.

³³ More on this in §5.13, below.

³⁴ See §2.2, above.

relation theory. According to this view, a subject represents the pencil as being behind the sharpener when she bears a certain relation to the pencil, the sharpener and the *behind* relation. As we saw, the problem with this position is that representing the pencil as being behind the sharpener requires grasping how the pencil, the sharpener and the *behind* relation are to be combined with one another in order for the representation to be correct.³⁵ This grasp cannot arise from a relation between the subject and the constituents to be combined. Hence the account allows representation to take place in the absence of this grasp, and the mode-of-combination constraint is not satisfied.

Suppose now that we try to solve the problem by construing representation of the pencil as being behind the sharpener as a relation that the subject bears to the pencil, the sharpener, the behind relation and the form of dual complexes. This strategy is ineffectual, as it faces the same problem as the original proposal. Being related to the constituents and the form of the represented complex won't enable the subject to grasp how the constituents are to be combined with one another unless she grasps how the constituents and the form are to be combined with one another. And grasp of how constituents and form are to be combined with one another cannot arise from a relation to the constituents and the form.

Consider now how spatial picturing fares with respect to the mode-of-combination constraint. Suppose once more that I represent the pencil as being behind the sharpener with the fact that the bottle is behind the cup. Suppose that when I grasp the picturing fact I grasp how its constituents are combined with one another. Then grasp of the picturing fact will enable me to grasp the mode of combination of the represented complex. I grasp how pencil and sharpener are represented as combined with one another (the former behind the latter) by grasping how the bottle and the cup are actually combined with one another (together, of course, with the pairing of bottle with pencil and cup with sharpener).³⁶

I want to argue that the difficulty faced by the versions of the multiple-relation theory that we've just considered doesn't arise for this model. The account doesn't explain my grasp of how pencil and sharpener are to be combined with one another through grasp of the relation (*behind*) by which they are to be combined. If we followed this route, it would be necessary to explain my grasp of how the objects and the relation are to be combined to form the represented complex. Grasp of how pencil and sharpener are to be combined with one another is explained instead through grasp of an actually obtaining complex in which two other objects (the bottle and the cup) are combined in that way. We haven't introduced a third entity whose mode of combination with the other two would need to be grasped. If we grasp how bottle and cup are actually combined, we grasp how pencil and

³⁵ The problem is not about order. It arises also for symmetrical relations.

³⁶ In Wittgenstein's characterisation of the phenomenon of pictorial representation, the subject is conspicuously absent. Where I say, e.g., that I use the fact that the bottle is behind the cup to represent the pencil as being behind the sharpener, Wittgenstein would say that the fact that the bottle is behind the cup represents the pencil as being behind the sharpener. There are important reasons for this feature of his presentation, which we will discuss in the next chapter. Pending that discussion, I shall present the picture theory as an attempt to solve the same problem as Russell's theories of judgment and understanding: how we manage to represent the world as being a certain way. In the next chapter we shall consider how, if at all, this approach can be squared with Wittgenstein's subject-less presentation.

sharpener are to be combined, since the way in which pencil and sharpener are to be combined is *the same* as the way in which bottle and cup are actually combined.

Let's consider next the situation with respect to logical picturing. Suppose now that I represent the pencil as being heavier than the sharpener with the fact that the bottle is behind the cup, and suppose once more that when I grasp the picturing fact I grasp how its constituents are combined with one another. Now my grasp of how pencil and sharpener are to be combined with one another does involve grasp of the relation (*heavier than*) by which they are to be combined in the represented complex. Hence grasping how pencil and sharpener are to be combined does require grasping how pencil, sharpener and the *heavier than* relation are to be combined, unlike in our example of spatial picturing. This is the first step of the regress faced by the multiple-relation theory.

However, in logical picturing the regress gets stopped at the next step—in the same way in which spatial picturing stopped it at the previous step. The way in which I grasp how the objects and the relation are to be combined is not by grasping a fourth item that embodies the mode of combination. This, as we've seen, would allow the regress to continue. Grasp of how the objects and the relation are to be combined results instead from grasp of how two other objects (the bottle and the cup) and another relation (*behind*) are actually combined in the picturing complex. Grasping how the bottle, the cup and the *behind* relation are actually combined amounts to grasping how the pencil, the sharpener and the *heavier than* relation are to be combined, because the pencil, the sharpener and the *heavier than* relation are to be combined *in the same way* in which the bottle, the cup and the *behind* relation are actually combined.

Now, I am arguing that the identity of the actual mode of combination of the picturing fact and the mode of combination that would produce the represented complex is an essential feature of Wittgenstein's proposal. The reason is that in its absence the cognitive regress would not be stopped. To see this, suppose that we try to represent the pencil as being heavier than the sharpener with a fact whose constituents are the bottle, the cup, the *behind* relation and a three-place relation connecting the remaining three constituents. For this purpose we define a ternary relation of *contiguity*, pairing a binary relation R and two objects a, b when there is no object c such that either aRc and cRb or bRc and cRa, i.e. when R doesn't put anything between a and b. Suppose now that, as a matter of fact, the bottle and the cup are contiguous with respect to the *behind* relation. We can now use this fact to represent the pencil as being heavier than the sharpener, taking the bottle, the cup and the *behind* relation as standing for the pencil, the sharpener and the *heavier than*, as before, and, in addition, taking contiguity to stand for binary instantiation.

Notice that this proposal would allow the regress to advance to the next step. Now we grasp how the pencil, the sharpener and the *heavier than* relation are to be combined with one another by grasping the item (the binary-instantiation relation) that is supposed to combine them. But grasp of the binary-instantiation relation won't produce grasp of how the pencil, the sharpener and the *heavier than* relation are to be combined with one another unless I grasp how the pencil, the sharpener, the *heavier than* relation *and* the binary-instantiation relation are to be combined with one another. In this case the regress is stopped at the next step. The way in which the pencil, the sharpener, the *heavier than* relation *and* the binary-instantiation relation are to be combined with one another is the way in which the bottle, the cup, the *behind* relation and contiguity are actually combined with one another, i.e. by the ternary-instantiation relation (see Figure 4). Hence I can

grasp the former by grasping the latter, without invoking a further item that is supposed to combine the pencil, the sharpener, the *heavier than* relation and the binary-instantiation relation into a unit.

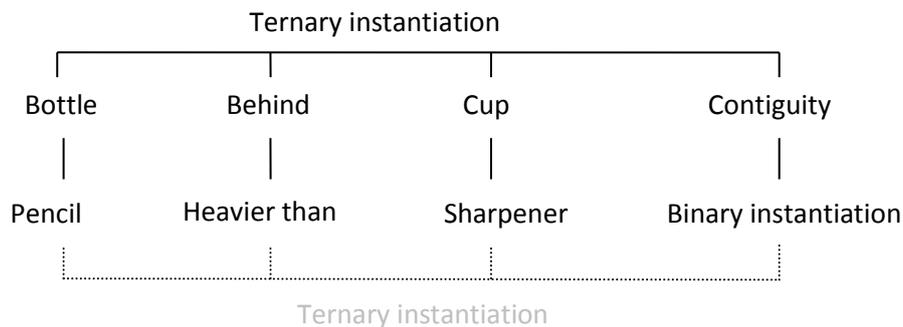


Figure 4

If there wasn't identity between the modes of combination at this level either, the regress would continue one more step. In general the regress will continue for as long as identity is not reached. If identity is not reached at any point, the regress will continue to infinity, and representation will not be possible.³⁷ Notice that the claim that things can only be depicted as combined with one another in ways in which some things are actually combined with one another (2.18) can now be seen as a corollary of this outcome.

The thought that there are no viable alternatives to pictorial representation is part of what Wittgenstein characterizes as his fundamental idea at 4.0312:

My fundamental idea is that the 'logical constants' are not representatives; that there can be no representatives of the *logic* of facts.

As we shall see in Chapter 6, Wittgenstein's idea applies to the representation of truth-functional composition and quantificational structure, but it also applies to states of affairs, i.e. simple combinations of objects. Concerning a state of affairs, what there cannot be representatives of (its logic) is the way in which its constituents would have to be put together (at the higher level of analysis) in order to produce the state of affairs. If we tried to represent a state of affairs with items standing for its constituents *and* their mode of combination, we would need to represent, in addition, the way in which the constituents and their mode of combination would have to be put together, giving rise to the familiar regress. That's why there cannot be representatives of the logic of states of affairs. Their modes of combination are not represented through representatives, but with facts whose constituents are combined with one another in that way.

It will be instructive to compare at this point Wittgenstein's pictorial representation with the model of representation that Russell put forward in *Theory of Knowledge*. As we saw, Russell claimed that in an episode of understanding the mind has to produce a synthesis of the constituents of the represented complex. I argued that with this demand Russell was seeking to stop the cognitive regress. As we have seen, Wittgenstein's idea that we use facts to represent things as being a certain way plays a similar role. The similarities end here. The synthesis that the mind would produce, on

³⁷ The early Wittgenstein's use of identity between the modes of combination of picturing fact and represented complex may well have been one of the targets of the later Wittgenstein's attack on the use of the notion of identity in philosophy (Wittgenstein 2001: §§215-16).

Russell's model, to represent the pencil as being heavier than the sharpener has as its constituents the pencil, the sharpener, the *heavier than* relation and the form of dual complexes. The fact that would do the picturing on Wittgenstein's model would have none of these constituents. In the case of a logical picture, its constituents would be two objects other than the pencil and the sharpener (e.g. the bottle and the cup) and, in the case of a logical picture, a relation other than the *heavier than* relation (e.g., the *behind* relation).

This difference has a very important consequence. If Russell's theory is to make room for falsehood, the way in which the pencil, the sharpener, the *heavier than* relation and the form of dual complexes are combined in the mental synthesis has to be different from the way in which they are supposed to be combined in the represented complex. Otherwise the production of the mental synthesis would ensure the truth of what is understood. Russell achieves this by taking the form to figure in the mental synthesis as a constituent while it figures in the represented complex in some other capacity, not as a constituent. But this means that Russell's model doesn't satisfy Wittgenstein's identity requirement. As a result, grasp of the mental synthesis won't produce grasp of how the constituents and form of the represented complex would have to be combined to produce the complex.

Wittgenstein, by contrast, doesn't face these difficulties. Because the constituents of the picturing fact are different from the constituents of the represented complex, saying that their modes of combination are identical doesn't jeopardize false representation. Now, when Wittgenstein insists that the mode of combination of picturing fact and represented complex have to be identical, it is hard not to see this as an implicit attack on a view that doesn't satisfy this requirement. If this impression is correct, then the view that Wittgenstein has in mind can be no other than Russell's 1913 theory of understanding.

2.7. Thoughts and propositions

So far, our discussion of pictorial representation has simply described a possible mode of representation, making no claim as to whether it is actually in use. In the 2.1s and the 2.2s, where the notion is introduced, all we are told is that picturing takes place, that we engage in it: "We picture facts to ourselves" (2.1). It's not until the 3s that we are told precisely where pictorial representation is to be found:

3. A logical picture of a fact is a thought.

Hence mental representation follows the model of pictorial representation presented in the 2.1s and the 2.2s. And what goes for mental representation goes for its linguistic counterpart:

3.1 In a proposition a thought finds an expression that can be perceived by the senses.

The discussion of pictorial representation was not idle academic speculation: all mental and linguistic representation is pictorial in nature.

The 3.1s provide a characterisation of how propositional signs represent things as being a certain way which is strictly parallel to the characterisation provided in the 2.1s and 2.2s of how pictures achieve this:

3.14 What constitutes a propositional sign is that in it its elements (the words) stand in a determinate relation to one another.

A propositional sign is a fact.

Here what I've presented as the central ingredient of pictorial representation is given further emphasis:

3.141 A proposition is not a blend of words.—(Just as a theme in music is not a blend of notes.)

A proposition is articulate.

3.142 Only facts can express a sense, a set of names cannot.

Notice that the thought that propositions represent by being facts is already expressed in the "Notes on Logic":

Propositions [which are symbols having reference to facts] are themselves facts: that this inkpot is on the table may express that I sit in this chair. (Potter 2009: 276)

The picture theory can be seen as a theoretical articulation of this basic insight.

At section 3.1432 Wittgenstein gives us an illustration of how the pictorial model is to be applied to linguistic representation:

Instead of, 'The complex sign "aRb" says that a stands to b in the relation R' we ought to put, 'That "a" stands to "b" in a certain relation says that aRb.'

This passage tells us that propositional signs should not be treated as objects standing for other objects, along the lines of how names refer. A propositional sign represents things as being a certain way by being a fact, in Wittgenstein's example, the fact "that 'a' stands to 'b' in a certain relation". We can characterise the picturing fact in this case as the fact that a name, 'a', bears to another name, 'b', the relation ρ , where x bears ρ to y when x is written to the left of y with 'R' between them. Hence the picturing fact is the fact that 'a' ρ 'b'.

Now in order for this fact to be a pictorial representation, it has to represent certain objects as combined with one another in the same way in which the constituents of the picturing fact are actually combined with one another. As we've seen, this can occur at two levels, depending on how we analyse the fact that 'a' ρ 'b'. On a lower-level analysis, the constituents of the fact are 'a' and 'b', while ρ is the way in which these constituents are combined with one another. If we use the fact as a picture at this level of analysis, it will represent a (the referent of 'a') as bearing relation ρ to b (the referent of 'b'). Clearly, if the model is applied at this level, the fact that 'a' ρ 'b' will be able to represent only a very restricted range of states of affairs. But picturing can also take place when we adopt the higher-level analysis of the picturing fact. And this is unquestionably the approach that we are supposed to take, since thoughts and propositions are *logical* pictures. At this level of analysis, the constituents of the picturing fact are 'a', 'b' and ρ , combined with one another by the binary-

instantiation relation. If the fact is used as a picture at this level, it will represent three objects as combined with one another in the same way in which 'a', 'b' and ρ are combined with one another in the picturing fact, i.e. by means of the binary-instantiation relation. This is how it manages to depict a as bearing relation R to b—i.e. a, b and R as combined with one another by the binary-instantiation relation.³⁸

It should be clear from my account of pictorial representation what I take to be Wittgenstein's main reason for thinking that propositions and thoughts are pictures—that linguistic and mental representation is pictorial in nature. Propositions (and thoughts) have to be pictures because there is no alternative. Pictorial representation is the only method by which we can represent things as being a certain way, as it offers the only viable solution to the mode-of-combination problem. But propositions and thoughts represent things as being a certain way. Therefore they have to be pictures.

There is one passage in the *Tractatus* where Wittgenstein appears to offer an argument in support of the claim that propositions are pictures. In the 4.0s, Wittgenstein takes up again the issue of the pictorial character of propositions. The claim that propositions are pictures is restated at 4.01:

A proposition is a picture of reality.

A proposition is a model of reality as we imagine it.³⁹

4.01 is followed by a series of sections numbered as dependent on it (4.011-4.016). The next proposition after these is 4.02:

We can see this from the fact that we understand the sense of a propositional sign without its having been explained to us.

There is no obvious referent for "this" in the section immediately preceding 4.02. This, together with Wittgenstein's numbering, lends strong support to the hypothesis that it refers back to 4.01, and hence that 4.02 offers a reason for thinking that a proposition is a picture of reality. The connection is confirmed by the next section:

4.021 A proposition is a picture of reality: for if I understand a proposition, I know the situation that it represents. And I understand the proposition without having had its sense explained to me.

In these passages, Wittgenstein derives the conclusion that propositions are pictures from the premise that there is something (the sense of the proposition) that doesn't need to be explained to us in order to understand the proposition. The key to interpreting the argument is to decide what it is that doesn't have to be explained to us. Notice first that there is something that does need to be explained to us if we are to understand a proposition:

³⁸ For an insightful discussion of the interpretation of 3.1432, see (Long 1969)

³⁹ Here, as elsewhere, the verb *to imagine* is used by the translators to render the reflexive use of the verb *denken* (as we imagine it = so wie wir sie uns denken). This may well be the best option overall, but it doesn't display as clearly as the original that thought is involved in the representation under discussion. Instead of "as we imagine it" Ogden has "as we think it is".

4.026 The meanings of simple signs (words) must be explained to us if we are to understand them.

In other words, explanation is required in order to come to know the constituents of the represented complex—which objects the proposition represents as combined with one another. So, what else do we need to know in order to understand a proposition but doesn't have to be explained to us? Clearly the answer is the way in which the constituents of the represented complex would have to be combined with one another in order to form the complex. As we saw in the previous chapter, the point had already been emphasized by Russell:

If we are acquainted with a and with similarity and with b, we can understand the statement "a is similar to b" [...]. But this would not be possible unless we knew how they are to be put together [...]. (Russell 1984: 101)

So understanding a proposition requires knowing both the constituents and the mode of combination of the represented complex. And whereas the former need to be explained to us, explanation of the latter is not required. This is the phenomenon that Wittgenstein is adducing in support of the pictorial character of propositions.

It is not hard to see why the premise would support the conclusion. If a proposition were 'a set of names', 'a blend of words', then understanding of the proposition would enable us to grasp the constituents of the represented complex. What it wouldn't enable us to grasp is the way in which these constituents would have to be combined in order to form the represented complex. Unless the mode of combination were explained to us, we wouldn't grasp the sense of the proposition. Hence, since the mode of combination doesn't need to be explained to us, a proposition is not a set of names. However, if propositions are pictures it becomes very easy to understand why the mode of combination doesn't need to be explained to us. If the proposition is a fact, then in grasping the fact we grasp both its constituents and how they are combined with one another. If now the referents of the constituents are explained to us, we will know which objects have to be combined with one another to form the represented complex. Crucially, knowing how these constituents would have to be combined with one another requires no additional explanation. The way in which they would have to be combined is the way in which the constituents of the proposition are actually combined, and this we have already grasped in grasping the fact the proposition consists in.

I mentioned above that the claim that propositions are facts is already clearly expressed in the "Notes on Logic". I want to suggest now that the pictorial model of representation seems to make an appearance, as a target of attack, in Russell's *Theory of Knowledge*. I have in mind the view that Russell attributes to Hume in Chapter IV of Part II:

[...] Hume conceives thought as conjoining the *ideas* of objects, while what makes a thought *true* is a conjunction of the *objects*. (Russell 1984: 139)

The view that the constituents of the thought are different from the constituents of the represented complex is clearly an aspect of Wittgenstein proposal. Wittgenstein doesn't refer to the constituents of the thought as ideas, but he doesn't seem to rule out the possibility that they are psychic items of some kind. This is how he puts the point in a letter to Russell of August 1919, in which he replies to Russell's queries about the *Tractatus*:

“Does a *Gedanke* consist of words?” No! But of psychical constituents that have the same sort of relation to reality as words. What those constituents are I don’t know. (McGuinness 2008: 99)

Russell is fully aware of the advantages of this move. The passage continues:

This gives, of course, a short and easy way of defining falsehood, and of distinguishing between propositions and the facts that make them true. (Russell 1984: 139)

However, for reasons that we will consider in the next chapter, Russell is firmly committed to the view that the constituents of the represented complex have to be constituents of the judgment complex:

For us, owing to our rejection of “ideas” as a *tertium quid* between subject and object, no such explanation is possible. When we judge that mercury is heavier than gold, *mercury* and *heavier* and *gold* must themselves be constituents of the event which is our judging [...]. (Russell 1984: 139-40)

What interests us is a difficulty that he raises for the Humean position. As Russell characterizes the view, when we judge “we bring our idea of mercury in some relation with our idea of gold” (Russell 1984: 140). Russell’s problem with this concerns the nature of the relation between ideas that is supposed to play this role:

The relation between my idea of mercury and my idea of gold cannot be “heavier”, since my ideas are not supposed to have weight. Nor can it be the *idea* of “heavier”, since that is not a relation. It must, therefore, be some new relation, in some way related to “heavier”, subsisting between my ideas, but not necessarily present to consciousness when I judge. (Russell 1984: 140)

Thus, on the view that, according to Russell, the Humean must adopt, we represent mercury as being heavier than gold with an actually obtaining complex in which an object that stands for mercury bears a relation that stands for “heavier” to an object that stands for gold. This account of representation clearly satisfies our characterisation of logical picturing. It corresponds to the way in which, in the example we used, the fact that the bottle is behind the cup can represent the pencil as being heavier than the sharpener. Taken as a characterisation of logical picturing, Russell’s account is incomplete, since it doesn’t mention the identity between the way in which the constituents of the picturing complex are combined with one another and the way in which the constituents of the represented complex would have to be combined with one another. Nevertheless, what he says about the Humean position is clearly compatible with logical picturing.

Russell sees no merit in the proposal:

This, however, is obviously absurd. My judging obviously consists in my believing that there is a relation between the actual objects, *mercury* and *gold*, not in there being in fact a relation between my ideas of these two objects. Thus the whole nature of belief must necessarily be misunderstood by those who suppose that it consists in a relation between “ideas”, rather than in the belief of a relation between objects. (Russell 1984: 140)

If this is offered as an argument against the Humean view, it is not very compelling. The Humean could concede that there being in fact a relation between two ideas doesn't amount to representing mercury as being heavier than gold. However she could contend that *grasp* of this fact, and of the correlations between the ideas and the relation between them, on the one hand, and mercury, gold and the relation "heavier", on the other, is what representing mercury as being heavier than gold consists in.⁴⁰ By taking this line, the Humean would be adopting the position that I am attributing to Wittgenstein.

It makes little sense to speculate about the connection between this passage of *Theory of Knowledge* and Wittgenstein's notion of pictorial representation. I am going to restrict myself to enumerating three salient possibilities. The first possibility is that the ideas that Russell is presenting and attacking are ideas that Wittgenstein had put to him. We know that Russell and Wittgenstein had extensive discussions of the ideas presented in *Theory of Knowledge*, and that Wittgenstein was thinking of representation along these lines by October 1913, a mere five months after Russell wrote these lines. If Wittgenstein had developed these ideas before Russell wrote about the Humean view, it would be surprising if he hadn't discussed them with Russell. Russell would have noticed that the views that he is attributing to Hume are similar to Wittgenstein's. The second possibility is that Wittgenstein's position was inspired by Russell's discussion of the Humean view. According to this hypothesis, the position would have been introduced in their conversations by Russell, and Wittgenstein would have extracted from it some of the central ideas of the picture theory. Finally, it is possible, of course, that there is no connection in either direction between Wittgenstein's proposal and the view that Russell attributes to Hume. The first of these possibilities strikes me as more plausible than the other two, but it is unlikely that we will ever come across enough evidence to decide the question.

2.8. The general form of a proposition

We might be able to use these ideas to cast some light on Wittgenstein's enigmatic characterisation of the general form of a proposition:

The general form of a proposition is: This is how things stand. (4.5)

On the most natural reading of this passage, Wittgenstein is simply claiming that propositions represent things as being a certain way (Black 1964: 236). But if this reading is correct, it is hard to see how the claim provides an answer to the question that Wittgenstein presents it as addressing. To give the most general propositional form, he tells us, is:

[...] to give a description of the propositions of *any* sign-language *whatsoever* in such a way that every possible sense can be expressed by a symbol satisfying the description, and every symbol satisfying the description can express a sense, provided that the meanings of the names are suitably chosen. (4.5)

⁴⁰ If the position is articulated along these lines, then Russell's contention that the relation between the ideas might not be present to consciousness when I judge would pose an obstacle to the view. For one could argue that grasp of the picturing fact would require grasp of its constituents, including the relation that refers to "heavier".

If this is what giving the general propositional form amounts to, then the task involves explaining *how* propositions represent things as being a certain way—what conditions a proposition has to satisfy in order to succeed in performing this representational function. On the natural reading of “this is how things stand”, characterising the general propositional form in these terms does not discharge this task. Here I want to consider an alternative reading of “this is how things stand” on which the claim that this is the general propositional form does live up to the expectations generated by Wittgenstein’s characterisation of the task.

I am suggesting that “this is how things stand” should express Wittgenstein’s answer to the question, what “the propositions of *any* sign-language *whatsoever*” have to be like in order to represent things as being a certain way. In light of what we’ve seen so far, Wittgenstein’s answer to this question can only be: they have to be pictures. If we follow this line of reasoning, Wittgenstein’s characterisation of the general propositional form would have to express the claim that propositions are pictures. Can “this is how things stand” be read in this way?

I want to suggest that this is possible, so long as we are prepared to read the demonstrative “this” (“so und so”, in the original) as referring to the picturing fact. Then “this is how things stand” could be paraphrased as: “the way things stand in the picture is the way things stand in the world”. We can illustrate the point with the example that Wittgenstein gives in the *Notebooks*:

In the proposition a world is as it were put together experimentally. (As when in the law-court in Paris a motor-car accident is represented by means of dolls, etc.)
(Wittgenstein 1979: 7)

On the reading that I am presenting, Wittgenstein’s characterisation of the general propositional form would provide the following account of how the accident is represented: this (i.e. the way things stand in the tableau vivant) is how the accident happened.

Clearly what “this” would demonstrate in this case is not the dolls, model cars, etc. We are not claiming that those were involved in the actual accident. “this” would demonstrate the way in which these items are arranged. This arrangement of the dolls, etc. is what we are claiming to be present in the actual situation. Then “this is how things stand” could be further unpacked as “the way in which the constituents of the tableau vivant are combined with one another is the way in which the objects involved in the accident were combined with one another”, or, more generally: “this mode of combination, exhibited by the picturing fact, is the way in which things are combined with one another in the world”. Wittgenstein’s claim would then be that the pictorial nature of propositions is what makes it possible ‘for every possible sense to be expressed’ and ‘for every symbol to express a sense, provided that the referents of the names are suitably chosen’. Propositions represent the world pictorially, by displaying how things stand.^{41 42}

⁴¹ The plausibility of this reading is somewhat decreased by comments made by Wittgenstein in his correspondence with Ogden on the translation of this passage:

In the end of this prop[osition] “Es verhält sich so und so” doesn’t mean “Things are combined in such and such a way” but—as I have mentioned above—it means something like “such and such is the case”. This is the only English expression I know for it. Perhaps one could say “things stand such and such”. The expression must be one used in every day language to express that something or other is the case. (Wittgenstein 1973: 30)

I am claiming, then, that the demonstrative in “This is how things stand” should be read as denoting the mode of combination of the constituents of the propositional picture. I’m supporting this claim with the contention that the characterisation of the general form of the proposition should express the pictorial nature of propositional representation. This point receives strong support from Wittgenstein’s gloss on the task of giving the most general propositional form. And once we accept this point, the reading of “This is how things stand” that I am defending acquires considerable plausibility.

Notice, also, that the standard reading is not without problems. Suppose that the demonstrative is read as denoting the represented state of things—not the tableau vivant, but the actual accident. On this reading, “this is how things stand” would provide a plausible characterisation of *true* propositions, in which the way things are represented as being coincides with the way things are. But the template would not be applicable to false propositions: *this*, on this reading, would *not* be how things stand, according to the proposition.

2.9. Depicting pictorial form

One of the central themes of the *Tractatus* is the idea that, given the account that it provides of how propositions and thoughts represent, there are limits to what they can represent. Wittgenstein unquestionably attached great importance to this aspect of his work. In a letter to Russell he writes:

I’m afraid you haven’t got hold of my main contention to which the whole business of logical propositions is only a corollary. The main point is the theory of what can be expressed (*gesagt*) by propositions—i.e. by language—(and which comes to the

Similar comments are made elsewhere concerning this expression (Wittgenstein 1973: 26-27, 33). Ogden adopts Wittgenstein’s proposal and translates the passage as “such and such is the case”. I want to suggest that this translation makes my reading seem less plausible than the original does. In Ogden’s translation, “such and such” is the subject of “is the case”. This makes it hard to see how it could refer to anything other than the represented complex. In the original, by contrast “so und so” is an adverbial complement of the verb. It denotes *the way* things stand. This makes it much more natural to read it as referring to the way things stand *in the picture*, as I am recommending. Wittgenstein’s second, unidiomatic proposal, “things stand such and such”, would preserve this feature of the original.

⁴² Notice that I’ve only offered an interpretation of the passage in its application to elementary propositions. However, it is clear that the general form of the proposition is supposed to include all propositions, non-elementary as well as elementary. The point is stated explicitly in the alternative characterisation of the general form of the proposition that Wittgenstein offers later on:

6 The general form of a truth-function is $[\overline{p}, \overline{\xi}, N(\overline{\xi})]$.

This is the general form of a proposition.

6.001 What this says is just that every proposition is a result of successive applications to elementary propositions of the operation $N(\overline{\xi})$.

(When applied to a set of propositions, the N operator produces the proposition that’s true just in case none of the members of the set are true. See (Geach 1981))

On the most natural extension of my reading to non-elementary propositions, “this” (“so und so”) would refer to those elementary propositions from which a given proposition results by successive applications of the N operator. The problem with this is that different propositions can result from different sequences of applications of the N operator to *the same* elementary propositions. I am going to argue below (§6.11) that this poses a serious problem for Wittgenstein’s position.

same thing what can be *thought*) and what cannot be expressed by propositions, but only shown (*gezeigt*); which, I believe, is the cardinal problem of philosophy. (McGuinness 2008: 98)

As we saw in the Introduction, the issue is of the greatest importance for Wittgenstein's programme. For the limits imposed by the nature of representation on what can be represented are expected to lead ultimately to the recognition of the propositions of the *Tractatus* as nonsensical.

The issue makes its first appearance in the pre-Tractarian manuscripts in the "Notes Dictated to Moore":

In order that you should have a language which can express or *say* everything that *can* be said, this language must have certain properties; and when this is the case, *that* it has them can no longer be said in that language or *any* language. (Wittgenstein 1979: 108)

In the *Tractatus*, the idea is introduced immediately after pictorial representation has been characterised. We are first told what a picture *can* depict:

2.171 A picture can depict any reality whose form it has.

The next section tells us what a picture can't depict:

2.172 A picture cannot, however, depict its pictorial form: it displays it.

I want to focus here on the first, negative claim of this section: a picture cannot depict its own pictorial form. The next two sections offer an argument for this claim:

2.173 A picture represents its subject from a position outside it. (Its standpoint is its representational form.) That is why a picture represents its subject correctly or incorrectly.

2.174 A picture cannot, however, place itself outside its representational form.

The argument appears to have the following structure:

1. A picture has to represent its subject correctly or incorrectly. (Premise)
2. In order to be able to represent its subject correctly or incorrectly, a picture must represent its subject from a position outside it. (Premise)
3. A picture cannot represent its representational form from a position outside it. (Premise)
4. A picture cannot represent its representational form correctly or incorrectly. (from 2 and 3)

Therefore:

5. A picture cannot represent its representational form. (from 1 and 4)

I want to suggest that the thrust of Premise 1 is the possibility of incorrect representation: picturing would only provide a satisfactory account of the kind of representation we are interested in if it were possible for a picture to represent its subject incorrectly—for things not to be as the picture represents them as being. Then Premise 2 makes the claim that a picture that didn't represent its

subject from a position outside it wouldn't be able to represent it incorrectly. And the reason why a picture cannot represent its own pictorial form is that it cannot represent it incorrectly.

In this section I want to concentrate on cases in which the pictorial/representational form of the picture is not its logical form. As I shall argue later on, these are the cases for which the argument is primarily intended. In §2.5 I introduced the contrast between lower-level and higher-level analyses of a fact. My focus will be pictures that represent according to their lower-level analysis. Let me refer to these pictures as *lower-level pictures*. In an example of lower-level picturing that we have used before, the fact that the bottle is behind the cup can represent the pencil as being behind the sharpener.

We know that the pictorial form of a picturing fact is the way in which its constituents are actually combined, at the (lowest) level at which this coincides with the way in which objects in the world are represented as combined. In our example, the pictorial form of the picture consisting in the bottle being behind the cup is the item corresponding to the relation *behind*. In Chapter 4, I am going to put forward a construal of Wittgenstein's conception of the constituents of facts and propositions. We shall see then that the constituent that corresponds to the relation *behind* is a certain feature of the fact—that it consists in an object bearing the *behind* relation to another object. This feature will be the pictorial form of this picture.

Pictures, as we know, represent things as being a certain way—e.g. the pencil as being behind the sharpener. What a picture can represent, according to 2.171, is a range of states of things. Now, in order for this discussion to make any sense, what, according to 2.172, a picture cannot represent, must also consist in things being a certain way. If it didn't have this character, then the argument for the claim that a picture cannot represent it would be entirely redundant: a picture wouldn't be able to represent it simply because it's not the kind of thing pictures are in the business of representing.

It follows that making more or less literal sense of the argument in the 2.17s requires thinking of pictorial form as a fact-like item—a way for things to be. I am going work on the assumption that pictorial form has this character and try to identify the most plausible candidate for the job, without worrying for now about whether what we end up with corresponds to a conception of pictorial form that the *Tractatus* as a whole can be seen as endorsing.

One possibility would be to treat as the pictorial form of the bottle-cup picture the following state of affairs:

The bottle being behind the cup consists in an object bearing the *behind* relation to another object.

However, focusing on this particular state of affairs won't enable us to appreciate the difficulty that Wittgenstein is raising. The problem with a picture depicting its own pictorial form is supposed to be that it cannot do so incorrectly, i.e. that if the picture depicted the state of affairs that its pictorial form consists in, this state of affairs couldn't fail to obtain. Furthermore, the impossibility of the state of affairs failing to obtain must be somehow due to the existence of the picture—the state of affairs cannot fail to obtain because the picture exists.

In order to pose this kind of problem, the state of affairs in question must be one that could fail to obtain if the picture didn't exist. This would enable us to discuss the effect of the existence of the picture on the possible obtaining of the state of affairs. These considerations render the current proposal problematic. It would require assuming that if the bottle is not behind the cup, the bottle being behind the cup will not consist in an object bearing the *behind* relation to another object. However, it seems natural to say that this is what the bottle being behind the cup consists in whether or not the objects are actually arranged in this way, just as, say, a two-hour marathon would consist in a person covering the requisite distance on foot in two hours or less whether or not this has ever been achieved.

In order to overcome this difficulty I propose to concentrate, not on the state of affairs consisting in the instantiation by the picture of its pictorial form, but on the state of affairs consisting in the existence of an instance of the pictorial form of the picture, i.e.:

There is a fact consisting in an object bearing the *behind* relation to another object.

And this state of affairs is logically equivalent to:

Some object bears the behind relation to some other object.

I propose then to construe Wittgenstein's claim that the bottle-cup picture cannot represent its own pictorial form as the claim that it cannot represent this state of affairs (i.e. $(\exists x, y) \text{ Behind}(x, y)$). In general, for any lower-level picturing fact of the form $R(a_1, \dots, a_n)$, the claim will be that it cannot depict the state of affairs $(\exists x_1, \dots, x_n) R(x_1, \dots, x_n)$.

To repeat, I am not claiming that this is the account of pictorial form defended by the *Tractatus* as a whole. My claim is simply that this is the best construal of the notion enabling us to make literal sense of the argument in the 2.17s. In any case, in spite of its Russellian appearance, the proposal is not that distant from the construal of the notion that I want to defend. I have argued that the pictorial form of the bottle being behind the cup is the relation *behind*, and, as I indicated above, in Chapter 4 I'm going to attribute to Wittgenstein a construal of relations according to which, say, the relation *behind* is a common feature present in all complexes of the form *x* is behind *y*. And it seems perfectly natural to characterise what these complexes have in common by saying that when one of them obtains some object bears the behind relation to some other object.

Our working hypothesis was that the problem that Wittgenstein's argument exploits concerns the need to make room for incorrect representation. This, according to Wittgenstein, can only be achieved when the picture represents its subject from a position outside it. In order to complete our construal of the argument, we just need to explain what this means. My proposal is that a picture represents its subject from a position outside it when the obtaining of the picturing fact doesn't make it the case that the represented complex obtains. On the construal of the pictorial form of lower-level pictures that I have adopted, this requirement is not satisfied. Putting all this together, we can provide a construal of Wittgenstein's argument along the following lines:

1. It has to be possible for a picture to represent its subject incorrectly. (Premise)
2. If the obtaining of the picturing fact makes it the case that the represented complex obtains, then the picture cannot represent its subject incorrectly. (Premise)

3. The obtaining of a lower-level picturing fact makes it the case that its pictorial form obtains. (Premise)
4. A lower-level picture cannot represent its pictorial form incorrectly. (from 2 and 3)

Therefore:

5. A lower-level picture cannot represent its pictorial form. (from 1 and 4)

Premise 1 can be taken as a stipulation: the kind of representation of a state of affairs that Wittgenstein is seeking to elucidate with the picture theory is representation that can be false—representation of a state of affairs that may or may not obtain.⁴³ This is the constraint that was violated by Russell’s dual-relation theory, and by the similar view that, according to Stout, Russell, at a later stage, unconsciously slipped into. Russell’s goal in 1913 was to provide a theory of representation that satisfied this constraint, and Wittgenstein’s aspiration was that his picture theory would succeed where he saw Russell as failing. Premise 2 is self-evident, and Premise 3 follows directly from our construal of the pictorial form of a lower-level picture. Furthermore, the argument is clearly valid. Hence, so long as we think of pictorial form along the lines that I have suggested, the conclusion is inescapable: a lower-level picture cannot represent its own pictorial form.

Now, Wittgenstein’s claim is that a lower-level picture cannot represent its pictorial form, not that the pictorial form of a lower-level picture cannot be represented at all. He doesn’t rule out the possibility that the pictorial form of a lower-level picture is represented by some other picture. This possibility is explicitly countenanced in a passage of the “Notes Dictated to Moore”:

In any ordinary proposition, e.g., “Moore good”, this *shews* and does not say that “Moore” is to the left of “good”; and here what is shewn can be *said* by another proposition. (Wittgenstein 1979: 111)

It is important to see that this *is* a possibility. The stronger claim—that the pictorial form of a lower-level picture cannot be represented by any picture—is incorrect. To see this, notice, first, that it is perfectly possible to represent the bottle as being behind the cup with a picture in which no object is behind any other object. We can achieve this by means of logical picturing. Thus, e.g., reversing the pictorial relation in the example that we used in §2.5, if the pencil is as a matter of fact heavier than the sharpener, we can use this fact to represent the bottle as being behind the cup, making the pencil stand for the bottle, the sharpener for the cup and the *heavier than* relation for the *behind* relation. The fact that the pencil is heavier than the sharpener is perfectly compatible with the possibility that nothing is behind anything, i.e. with the possibility that the lower-level form of the bottle being behind the cup doesn’t obtain.

Now, although the fact that the pencil is heavier than the sharpener can represent the bottle as being behind the cup, this is not what’s needed. What we need is a picture that represents that

⁴³ There are reasons for thinking that Wittgenstein didn’t see Premise 1 as a mere stipulation, but as a substantive principle to the effect that a proposition would not be meaningful unless there were both situations that make it true and situations that make it false. I believe, however, that treating Premise 1 in this way weakens the argument, since Wittgenstein offers, to my mind, no cogent support for this principle.

something (anything) is behind something (anything), i.e. $(\exists x,y) \text{ behind}(x,y)$, and it is hard to see how the fact that the pencil is heavier than the sharpener could perform this task. As we shall see in Chapter 6, it is not clear that Wittgenstein has a satisfactory account of how his picture theory can be applied to the depiction of existential and other molecular states of affairs. However, these difficulties are independent of the problem we are discussing. The point that matters for our purposes is that if there was an otherwise satisfactory account of how to picture logically an existential state of affairs, it could be applied to the depiction of the lower-level form of the bottle being behind the cup. The possibility of representing this state of affairs incorrectly shouldn't in principle pose a problem.

Suppose, as an illustration that we use as our picture the fact that something is heavier than something, making the *heavier than* relation stand for the *behind* relation. Now we would be representing the behind relation as 'combined' into a complex in the same way in which the heavier than relation is 'combined' into the picturing fact. There may be all sorts of reasons why this account is not satisfactory, or not available to Wittgenstein. However my point is that the account wouldn't suffer from the problem we are considering. Something being heavier than something is perfectly compatible with nothing being behind anything.

2.10. Depicting logical form

The thoughts concerning the depiction of pictorial form expressed by 2.171-2.172 are clearly echoed in a later section concerning logical form:

4.12 Propositions can represent the whole of reality, but they cannot represent what they must have in common with reality in order to be able to represent it—logical form.

The earlier passage tells us what a picture can represent ('any reality whose form it has') and what it cannot represent ('its pictorial form'). 4.12 tells us what propositions can represent ('the whole of reality') and what they cannot represent ('logical form').

The parallel is surely intended. There is, however, an important difference between what the earlier passage claims about pictorial form and what's now being claimed concerning logical form. As we saw in the preceding section, Wittgenstein is only claiming that a picture cannot represent its own pictorial form, not that the pictorial form of a (lower-level) picture cannot be represented by any picture. With respect to logical form, by contrast, he's making the stronger claim: the logical form of a proposition cannot be represented by any proposition. The difference between the two claims is highlighted in the continuation of the passage of the "Notes Dictated to Moore" quoted in the preceding section, in which we are told that what "Moore good" shows can be said by another proposition:

But this only applies to that *part* of what is shewn which is arbitrary. The *logical* properties which it shews are not arbitrary, and that it has these cannot be said in any proposition. (Wittgenstein 1979: 111)

This suggests that the relevant contrast is between the aspects of the structure of a picture that correspond to its lower-level analysis and those that correspond to its higher-level analysis. Let's say

that a picture is a *higher-level picture* when what it has in common with the represented complex is the aspects of its structure corresponding to its higher-level analysis—i.e. when its pictorial form is its logical form. Wittgenstein's claim is that the pictorial form of a higher-level picture—i.e. its logical form—cannot be represented by any picture.

At 4.12 he explains in the following terms why logical form cannot be represented:

In order to be able to represent logical form, we should have to be able to station ourselves with propositions somewhere outside logic, that is to say outside the world.

This is clearly parallel to the argument he had offered at 2.173-2.174 for the claim concerning pictorial form. In both cases irrepresentability is supposed to follow from the impossibility of representing the relevant subject from a position outside it. This strongly suggests that for logical form, as well as for pictorial form, the problem concerns the need to make room for incorrect representation. I am going to assume here that this is the source of the difficulty. I am also going to use the construal I provided in the preceding section of what it means for a picture to represent its subject from a position outside it: this will happen whenever the obtaining of the picturing fact doesn't make it the case that the represented complex obtains.

All we need now is a construal of the notion of logical form. In §4.8, below, I'm going to provide a construal of the notion of the logical form of a fact or proposition. On my proposal, the logical form of, say, the fact that the bottle is behind the cup will be a feature of this fact—that it consists in some object bearing some binary relation to some object. Adapting our discussion in the preceding section, we can argue that in order to consider the possibility of logical forms being represented by propositions, we need think of a logical form as a state of affairs—a way for things to be. A straightforward analogue of a possibility that we considered there would be to focus on the following state of affairs:

The bottle being behind the cup consists in an object bearing a binary relation to another object.

However the reasoning that we sketched in the preceding section suggests that this is not an appealing option. Once again it will be preferable to concentrate on the existential generalisation of this state of affairs, i.e.:

There is a fact that consists in an object bearing a binary relation to another object.

Or, equivalently,

Some object bears some binary relation to some other object.

In general, the logical form of a fact of the form $R(a_1, \dots, a_n)$ will be $(\exists \rho, x_1, \dots, x_n) \rho(x_1, \dots, x_n)$.⁴⁴ My proposal then is to construe Wittgenstein's claim that the logical form of a proposition cannot be

⁴⁴ This could also be written as $(\exists \rho, x_1, \dots, x_n) \in_n (\rho, x_1, \dots, x_n)$. Nothing will turn on which of these symbolisations we adopt.

represented by any proposition as the claim that no proposition can represent a state of affairs of the form $(\exists \rho, x_1, \dots, x_n) \rho(x_1, \dots, x_n)$.

As with lower-level pictorial form, we can argue that the conception of logical form reached is not all that distant from the construal of the Tractarian notion that I am going to defend in §4.8. On that construal, the logical form of the bottle being behind the cup is a feature that it shares with all complexes of the form xYz , and it seems perfectly natural to say that what these complexes have in common is that when one of them obtains some object bears some binary relation to some other object.⁴⁵

Let's concentrate once more on the state of affairs of the bottle being behind the cup. We are treating as its logical form the state of affairs consisting in some individual bearing some binary relation to some individual, i.e. $(\exists \rho, x, y) \rho(x, y)$. The reasoning that we gave to argue that the bottle being behind the cup cannot depict its own lower-level form can also be used to argue that it cannot depict its higher-level form. For the obtaining of the state of affairs of the bottle being behind the cup would necessarily make it the case that some individual bears some binary relation to some individual—i.e. that the state of affairs that its logical form consists in obtains.

However, as we have seen, Wittgenstein is not claiming only this. His claim in this case is that the logical form of the bottle being behind the cup cannot be depicted by any other picture either.⁴⁶ How is this result obtained? Notice that the strategies that we considered for representing pictorial form won't work here. The pencil being heavier than the sharpener is compatible with nothing being behind anything, but it is certainly not compatible with nothing bearing any binary relation to anything. And the same goes for the state of affairs consisting in something being heavier than something. If this state of affairs obtains, then necessarily, once again, something bears some binary relation to something. In order to depict the logical form of the bottle being behind the cup, we would need a fact whose obtaining doesn't involve anything bearing any binary relation to anything, and it is hard to see how any fact that satisfies this requirement could be used to depict this logical form. For the constituents of the picturing fact would have to be combined with one another in the same way in which objects would have to be combined with one another in order for $(\exists \rho, x, y) \rho(x, y)$ to obtain, and this mode of combination would have to involve binary instantiation.

⁴⁵ This may seem to take Wittgenstein back to Russell's 1913 conception of forms. For Wittgenstein, however, there was a crucial difference. As we saw in §2.2, Wittgenstein thought that Russellian forms had to be treated on a par with other facts. But he didn't treat his own logical forms in this way. He saw logical forms as arising only as a result of a process of abstraction, and he thought that the presence of a logical form in a complex, like the instantiation of an internal property or relation (see §5.10), should not be treated as a separate item in the catalogue of facts.

⁴⁶ I have construed the logical form of a proposition as a (fully existentially generalised) fact, and I am claiming that Wittgenstein is trying to argue that no proposition can represent this fact. This might seem to carry an implicit commitment to readings of the *Tractatus* on which Wittgenstein seeks to establish a category of inexpressible truths (see the Introduction, above). But this is not so. He didn't think of these facts as inexpressible but ontologically unproblematic. On the contrary, he thought that the complete catalogue of facts would not contain any entries corresponding to them. His position on this point seems deeply unstable, and it may well be one of the areas where we are expected to appreciate the incoherence of the positions designated as correct by the rules that define the practice of philosophy. See §3.11 for further discussion.

We can formulate the argument in the following terms:

1. It has to be possible for a picture to represent its subject incorrectly. (Premise)
2. If the obtaining of the picturing fact makes it the case that the represented complex obtains, then the picture cannot represent its subject incorrectly. (Premise)
3. The obtaining of any picturing fact that would be otherwise suitable for representing the logical form of a (picturing) fact would make it the case that the logical form obtains. (Premise)
4. No picturing fact can represent the logical form of a (picturing) fact incorrectly. (from 2 and 3)

Therefore:

5. No picturing fact can represent the logical form of a (picturing) fact. (from 1 and 4)

Premises 1 and 2 are unproblematic, as before, but now Premise 3 is open to question, even on our assumption concerning the construal of logical forms. Let's consider what it would involve by focusing on the specific example of the fact that the bottle is behind the cup. On our assumption that the logical form of this fact is $(\exists \rho, x, y) \rho(x, y)$, the application of Premise 3 to this fact is the claim that the obtaining of any picturing fact that would be otherwise suitable for representing $(\exists \rho, x, y) \rho(x, y)$ would make it the case that $(\exists \rho, x, y) \rho(x, y)$ obtains. This would be so provided that any picturing fact that would be otherwise suitable for representing $(\exists \rho, x, y) \rho(x, y)$ involves an instance of binary instantiation. Is this so?

In order to answer this question, we need to consider how existential situations would be represented according to the *Tractatus*. This can be achieved with Wittgenstein's operator N (5.502). When applied to a set of propositions, N yields the proposition that's true just in case all the elements of the set are false. Now if B the set of all propositions that represent binary complexes, 'N(B)' will be the proposition that no object bears any binary relation to any object, and 'N(N(B))' will be the proposition that at least one object bears at least one binary relation to at least one object, i.e. $(\exists \rho, x, y) \rho(x, y)$. Hence 'N(N(B))' will represent the logical form of the fact that the bottle is behind the cup, falsifying the conclusion of Wittgenstein's argument. A proper assessment of this proposal would take us too far away of our main goal, as it would require extensive discussion of Wittgenstein's treatment of non-elementary propositions. We shall approach this issue later on (§6.11). For now I only want to point out a difficulty that threatens to scupper this strategy.

The claim that propositional signs are facts is supposed to apply to all propositions, non-elementary as well as elementary. So 'N(N(B))' has to be a fact. The main problem in interpreting Wittgenstein's treatment of non-elementary propositions is to understand which fact is supposed to do this job. As we have seen, an elementary proposition is a fact with the same logical form as the represented complex. As we'll see in §6.11, there are general problems with applying this model to non-elementary propositions. Here I want to concentrate on a problem raised specifically by fully existentially generalised propositions. Take, for example, the representation of something bearing some binary relation to something. On the proposal that we are considering, this would have to be represented with a fact of the same logical form. The problem is that there seems to be *only one* fact of this form. If this is right, then the fact that 'N(N(B))' consists in will have to be identical with the represented complex. Hence, trivially, the obtaining of the representing fact would bring about the

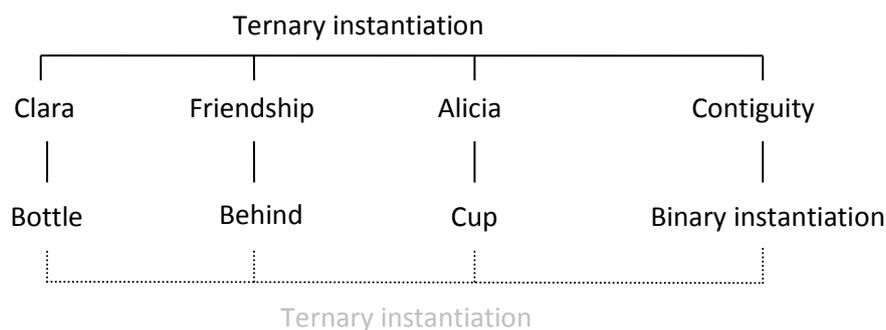
obtaining of the represented complex. On this account of how non-elementary propositions represent, 'N(N(B))' doesn't falsify Premise 3.

On an alternative account of how non-elementary propositions represent, the facts involved in 'N(N(B))' would be the elements of B, i.e. the facts that serve as propositions representing binary states of affairs, including, e.g., a proposition representing the bottle as being behind the cup. But the elements of B will have to have the same logical form as the states of affairs they depict, i.e. each of them will have to consist in an object bearing a binary relation to an object. It follows that 'N(N(B))' doesn't falsify Premise 3 on this account either. The fact 'N(N(B))' consists in will include facts to the effect that an object bears a binary relation to an object. Hence its obtaining will make it the case that $(\exists x, y) \rho(x, y)$ obtains.⁴⁷

Another strategy for trying to undermine Premise 3 exploits a move we have already discussed. The basic thought is that we might be able to represent the bottle as being behind the cup with a fact that doesn't require anything to bear any binary relation to anything. Consider once more the relation of contiguity that we introduced earlier—a ternary relation pairing a binary relation R and two objects a, b when there is no object c such that either aRc and cRb or bRc and cRa, i.e. when R doesn't put anything between a and b. Suppose now that, as a matter of fact, Clara and Alicia are contiguous with respect to the friendship relation, i.e. they don't have any friends in common.

We could try to use this fact to represent the bottle as being behind the cup. We would take friendship to stand for the *behind* relation, Clara for the bottle, Alicia for the cup *and* contiguity for binary instantiation. Then we would take the fact that Clara and Alicia are contiguous with respect to friendship—i.e. that contiguity, friendship, Clara and Alicia are connected by the ternary instantiation relation—to represent binary instantiation, the behind relation, the bottle and the cup as combined with one another in the same way—i. e. to represent binary instantiation (a ternary relation) as instantiated by the behind relation, the bottle and the cup.

⁴⁷ We saw in §2.2 that Wittgenstein had criticised Russell's conception of forms because he was forced to treat fully existentially generalised propositions as necessary truths. If the difficulties we are raising here are genuine, then, if there were propositions representing fully existentially generalised states of affairs, then Wittgenstein, like Russell, would have to ascribe to them a very special status. They wouldn't be necessarily true, but they would have the following feature: their existence would entail their truth. Furthermore, it would be possible to tell from the proposition alone that it is true, without comparing it with reality. But since, according to the 2.22s, there can be no propositions with these features, we have to conclude that there are no propositions representing fully existentially generalised states of affairs. 'N(N(B))' would then have to be treated along the same lines as tautologies—as a proposition that doesn't stand in any representational relation to reality.



If this is an acceptable way of picturing the bottle as being behind the cup, this will have been achieved with a fact—Clara and Alicia being contiguous with respect to friendship—whose obtaining doesn't obviously entail that anything bears any binary relation to anything. For a can be contiguous to b with respect to R even if a doesn't bear R to b, and even if nothing bears R to anything. The fact that Clara and Alicia are contiguous with respect to friendship is compatible with (in fact, entailed by) no one being anyone's friend. Hence the obtaining of the picturing fact doesn't seem to necessitate the obtaining of the state of affairs $(\exists \rho, x, y) \rho(x, y)$ that we are treating as the logical form of the bottle being behind the cup.

Now, even if the fact that Clara and Alicia are contiguous with respect to friendship could represent the bottle as being behind the cup, it wouldn't represent the logical form of this state of affairs. However, the general strategy that this exemplifies might be expected to generate a suitable representation of this logical form. As an illustration, as before, we might try to use the fact that there exist three items connected by the contiguity relation to picture the existence of three items connected by the binary-instantiation relation. Whatever other problems this proposal might face, it won't suffer from the problem that we are trying to avoid: the obtaining of the picturing fact appears to be compatible with the non-obtaining of the represented complex, since, as we have seen, the existence of three items connected by contiguity doesn't seem to entail that anything bears any binary relation to anything. If this is a viable proposal, then Premise 3 of the argument is wrong, and if my construal of Wittgenstein's argument is along the right lines, Wittgenstein hasn't shown that the logical form of a proposition cannot be depicted by another proposition.

There are a couple of ways in which one might try to defend Premise 3 from this objection. One could argue first that binary instantiation is a *sui generis* relation—that the way in which it connects a relation and two objects is different from the way in which any normal ternary relation connects three items. Notice that if this point is accepted, our objection to Premise 3 collapses. The way in which binary instantiation would have to connect the bottle, the cup and the *behind* relation in order for the bottle to be behind the cup is *not* the way in which Clara, Alicia and friendship are connected by the contiguity relation. The latter are combined by ternary instantiation, whereas the former would have to be combined by a *sui generis* four-place relation (call it *binary meta-instantiation*). Hence what we presented as an instance of picturing is no such thing. To represent binary instantiation as combining the bottle, the cup and the behind relation in the way in which they would have to be combined in order for the bottle to be behind the cup, we would need a fact in which four items are combined, not by ternary instantiation, but by binary meta-instantiation. And this would not allow us to resist Premise 3. Binary meta-instantiation connects binary

instantiation, a binary relation and two objects. And when it does, necessarily, binary instantiation connects the binary relation and the two objects, as Premise 3 dictates.

A second way in which one could reply to our objection to Premise 3 is by challenging the claim that the fact that a ternary relation combines three objects is compatible with nothing bearing any binary relation to anything. Going back to our example, we saw that Clara and Alicia being contiguous with respect to friendship is compatible with no one bearing the friendship relation to anyone. One could argue, however that there is a binary relation other than friendship that is necessarily instantiated whenever contiguity is instantiated. For a given relation R , let R -contiguity be the relation that a bears to b just in case a and b are contiguous with respect to R . It is easy to see that necessarily if a and b are contiguous with respect to R , then a is R -contiguous with b . Thus, in our example, the fact that Clara and Alicia are contiguous with respect to friendship entails that Clara and Alicia are *friendship-contiguous*. Hence the instantiation of contiguity by two objects and a relation entails the instantiation of a binary relation by these two objects, and Premise 3 is satisfied.

The point is quite general. If R is an n -place relation, and a_1, \dots, a_n are such that $R(a_1, \dots, a_n)$, then, necessarily, $n-1$ place relations S_1, \dots, S_n are instantiated, where, for all x_1, \dots, x_{n-1} , $S_1(x_1, \dots, x_{n-1})$ just in case $R(a_1, x_1, \dots, x_{n-1})$, $S_2(x_1, \dots, x_{n-1})$ just in case $R(x_1, a_2, x_2, \dots, x_{n-1})$, etc. Hence the instantiation of a ternary relation entails that (three) binary relations are instantiated. It follows that the strategy that I have described offers no counterexample to Premise 3.

I think that the line of reasoning that I've developed in this section offers the most promising avenue available to Wittgenstein for showing that any attempt to represent the logical form of a proposition will fail to make room for the possibility of incorrect representation. We haven't reached a conclusive verdict on the cogency of the argument. The plausibility of the claim that this is the line of reasoning that Wittgenstein is advancing is somewhat reduced by the modifications to his notion of logical form that we have introduced in order to run the argument.

Another factor weighing against the attribution of this line of reasoning to Wittgenstein is the fact that it cannot be extended to other claims that the *Tractatus* presents as related. Immediately after 4.12, Wittgenstein provides an extensive catalogue of what propositions can't say. And, as I'll argue in Chapter 5, it doesn't seem possible to generalise the argument that I have presented here to cover these cases. This means also that the argument will be of limited use at the second stage of Wittgenstein's programme. Even if it succeeds, the meaningfulness of many of the philosophical doctrines of the *Tractatus* won't be under threat. We need to look elsewhere in the *Tractatus* for the source of a more wide-ranging challenge to the meaningfulness of its propositions. We shall undertake this task in Chapter 5.

2.11. Showing

If I am going to use the fact that the bottle is behind the cup to represent the pencil as being heavier than the sharpener, I need to have some cognitive access to that fact and its structure. I need to grasp how its constituents are combined with one another—its logical form—, as well as the pairings of its constituents with the objects that I intend to represent (the pencil, the sharpener and the *heavier than* relation). As we have seen, Wittgenstein thought that I cannot grasp the logical form of

a fact by picturing it. But then, how do I grasp the logical form of a fact that I am going to use as a logical picture?

Wittgenstein postulates an alternative non-pictorial model of how pictorial form in general, and logical form in particular, is made available to us. A picture, he tells us at 2.172, “displays” (aufweisen) its pictorial form. Our access to logical form is described in similar terms at 4.121: Logical form is “mirrored” (spiegeln) in propositions, it “expresses *itself*” (sich ausdrücken) in language. Propositions “show” (zeigen), “display” (aufweisen) the form of reality. And the same mode of access is invoked to explain our grasp of the pairings of the constituents of the picturing fact with the objects they stand for: “one proposition '*fa*' shows that the object *a* occurs in its sense” (4.1211).

The introduction of a non-pictorial mode of access to logical form is a move that we saw Russell make in 1913. On his account of understanding, understanding a proposition required grasping its form. If this grasp could be achieved only by the kind of understanding that the account is seeking to explicate, we would face an infinite regress (understanding of the form would require grasp of its form, etc.). For this reason, Russell concluded that “understanding of the pure form ought to be simpler than that of any proposition which is an example of the form” (Russell 1984: 129). As we saw, Russell didn’t have strong views on whether our access to forms should be characterised as understanding or acquaintance. What was clear to him was that it would have to be a dual relation, in which the subject is directly aware of the form.

Wittgenstein’s picture theory faces a similar problem. Using a fact as a (logical) picture requires grasping the (logical) form of the picturing fact. But if this grasp consisted in picturing the logical form, we would need to find a fact to picture it, and we would need to grasp the logical form of this fact. An infinite regress seems unavoidable. It follows that the picture theory requires a non-pictorial account of how we access logical forms. Even if, contrary to what Wittgenstein has argued, we could picture the logical forms of facts, our grasp of the logical forms of the facts that we use as pictures would have to be non-pictorial. Having logical forms shown or displayed to us solves for Wittgenstein the problem that the dual relation of understanding of, or acquaintance with, forms solved for Russell.

Furthermore, Wittgenstein seems to be thinking of our access to logical forms along the same lines as Russell—as a pseudo-perceptual, immediate relation to facts and their forms. In the “Notes Dictated to Moore”, where the notion appears for the first time, it is characterised as a kind of seeing:

It is *obvious* that, e.g., with a subject-predicate proposition, *if* it has any sense at all, you *see* the form, so soon as you *understand* the proposition, in spite of not knowing whether it is true or false. (Wittgenstein 1979: 110)

The perceptual analogy also appears in the *Tractatus*:

5.5423 To perceive a complex means to perceive that its constituents are related to one another in such and such a way.

I am suggesting that this is what happens when the logical form of a fact is shown to us: we perceive that the constituents of the fact are combined with one another in such and such a way.

It is interesting to see that this mode of perception of complexes is contemplated in Russell's *Theory of Knowledge*:

There would seem [...] to be two kinds of perception of a complex, namely "simple perception", which does not involve acquaintance with the parts, and "complex perception", where the complex is seen *as* a complex of interrelated parts. But if this is the case, [...] there will be a way of perceiving γ as "a-R-b", where R is the relation between a and b in virtue of which they form the complex γ . (Russell 1984: 125)

What Russell is calling 'complex perception' is the relation that, according to Wittgenstein, we bear to a fact when it shows or displays its logical form to us.

Now, there are in principle two ways of conceiving of the relationship between these episodes of direct grasp of logical forms and the logical forms to which we gain access in them. On the first model, facts have the logical forms they have independently of our access to them. In grasping a logical form, we gain access to what is already there. On the second model, logical forms have no reality independently of our grasp of them. The logical form of a fact is nothing over and above the logical form that we grasp it as having. The episode in which we grasp the logical form of a fact makes it the case that it has this form.

I am not going to develop here this contrast or discuss the compatibility of each of the models with the Tractarian account of representation and reality. I only want to suggest that the issue offers a promising avenue for construing the debate between realist readings of the *Tractatus*, according to which the structure of reality resides in the facts themselves, and idealist readings, according to which it is generated by our representational activity.