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CHAPTER 4

WITTGENSTEIN'S REMARKS ON COLOURS[1]

Summary

My aim is to show how philosophical arguments regarding colours are treated very differently by Wittgenstein in the course of his philosophical research: from a logical point of view he would pass, in a second period, to attend to the same issues in a different way involving the relation between logic and experience, between perception and language, or between logical and grammatical forms which concern the way by which we encounter reality. Philosophy ought not to be concerned with logical or mathematical constructions, idealised and abstracted forms which lose every contact with our *Lebensformen*, but it must be related to the different ways by which we can describe the great range of phenomenon which constitute our world. There is no place for *explanation* at this point of analysis or there are not *supertheories* which impose *from above* upon the facts or events of the world. At this level of the philosophical investigation it is no more possible to reduce a philosophical approach to another one which is very different from the former: i.e. linguistic analysis to phenomenology and conversely.

As a conclusion, we could state that the language-game played by colour-words is something which presents itself, owing to the *multidimensional complexity* of its rules, with the character of "ineffability", so that every attempt to reduce it to a more primitive game, or, worse still, to a conceptual scheme able to give an extrinsic explanation of its working goes wrong.

For whom who desires to achieve a systematical reconstruction of philosophical issues this conclusion may result unsatisfying like a proposition of the following form: " it does work and that's all"; but for the one who is satisfied with a *descriptive* and *not a foundational* approach to philosophical questions the same conclusion may appear adequate.

1. The colour-exclusion problem

In the *Tractatus* we can find a place completely devoted to the colour exclusion problem: it is proposition 6.3751:

For two colours, *e.g.* to be at one place in the visual field, is impossible, logical impossible, for it is excluded by the logical structure of colour.

Therefore, the status of colour exclusion is acknowledged as a *logical* or *analytic* one; but, according to the definition of a *logical proposition* given in the *Tractatus* itself, this status cannot be allowed.

We can trace all the difficulties which arise at this point of our analysis back to the *Tractatus*.

In this work , a *well-formed formula* either *depicts* some facts, or is a *logical* one: the former class of propositions deals with facts, saying something about the world of which propositions are images (*Bilder*).

The truth-value of a *depicting* proposition may be obtained by comparing the proposition itself with the world: proposition 2.223 states as a matter of fact:

In order to discover whether a picture is true or false we must compare it with reality.

A condition for such a proposition of being meaningful is the possibility to be true or false, not just to have one truth-value; this depends on the ontological status of facts which are contingent, that is, of facts which can happen or not.For this reason *necessary* facts do not exist, so that the truth-value of meaningful depicting propositions is *a posteriori*.

Proposition 2.225 declares also:

There is no picture which is a priori true.

On the contrary, a well-formed formula has a truth-value *a priori*, excluding in this way the possibility to be identified with a depicting proposition; *logical propositions*, according to the *Tractatus*, have an *a priori* truth-value, as we can argue following proposition 4.46:

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Among the possible groups of truth-conditions there are two extreme cases.

In the one case the proposition is true for all the truth-possibilities of the elementary propositions. We say that the truth-conditions are *tautological*.

In the second case the proposition is false for all the truth-possibilities. The truth-conditions are *self-contradictory*.

In the first case we call the proposition a tautology, in the second case a contradiction.

Whatever truth-value combinations the constituents of a tautological or a self-contradictory proposition have, the resulting truth-value is invariable, that is to say, independent of the happening or not happening of any fact, thus *a priori*; consequently this kind of propositions does not depict any fact, they are not images.[2]

Hence, if a proposition is *a posteriori*, it is a depicting one, while being an *a priori* proposition means to be a *logical one*.

Therefore we can deduce that the classes of *a priori* propositions and of *logical* propositions coincide with one another, as well as the classes of *a posteriori* propositions and that of *depicting* ones.

Alleged this coincidence, it can be inferred that there are not *synthetic a priori* propositions, because it is impossible to say something about the world and at the same time to preserve the *a priori* status of the proposition involved.

According to Roberto Ciuni[3], the appeal to Husserl's conception of analytic propositions (*analytische notwendige Sätze*) could be useful for a deeper comprehension of the problems involved by the colour exclusion problem. In the *Third Logical Investigation* Husserl points out:

We may define *analytically necessary propositions* as propositions whose truth is completely independent of the peculiar content of their objects (whether thought of with definite or indefinite universality) and of any possible existential assertions. They are propositions which permit of a *complete 'formalization'* and can be regarded as special cases or empirical applications of the formal, analytic laws whose validity appears in such formalizations. In an analytic proposition it must be possible, without altering the proposition's logical form, to replace all material which has content, with an empty formal *Something*, and to eliminate every assertion of existence by giving all one's judgements the form of universal, unconditional laws.[4]

Thus, the truth-value of analytically necessary propositions remains constant in every substitution instance of predicative and individual constants; in prop. 4.4661 of the *Tractatus*, Wittgenstein states that in a *logical proposition* the relation among signs (predicative or individual constants) does not matter:

Of course the signs are also combined with one another in the tautology and contradiction, *i.e.* they stand in relations to one another, but these relations are meaningless, unessential to the *symbol*.

Only combinations of the connectives are important in a logical proposition: this implies that a logical proposition keeps its truth-value in every substitution instance, so that it can be driven to the previous definition of an analytic proposition.

As we have seen, in the *Tractatus*, the notions of *necessity* and *impossibility* have a logical nature (that is, *tautology* and *contradiction*), and for this reason they have an analytic character; but this means that necessity and impossibility are *a priori*.

At this point of analysis, thence the problem concerning the colour exclusion arises: in fact a proposition like "R(p)t.B(p)t" states the co-presence of two colours at the same place and at the same time: is this proposition to be grasped as a logical impossibility, as a contradiction?

Indeed, such a conjunction does not keep its truth-value in every substitution instance, since if one provides the previous proposition with a substitution like "This patch is red at time t and the same patch is small at time t", one has a proposition which can be true or false, not a *contradiction*.

Following Roberto Ciuni:

Since, clearly, R(p)t.B(p)t does not have the form α.∼ α (I'll discuss this option later), it cannot be said to be a *contradictory proposition*, and so the colour exclusion cannot be a *logical impossibility*[5].

To avoid misunderstanding, it would be constructive to consider the role which the notion of *elementary proposition* plays in this problem: in the *Tractatus*, it is without doubt that an *Elementarsatz* is something stating relations of names in

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"immediate combination".[6]An elementary proposition deals with objects that have the mark of *simplicity*: the *Tractatus* does not provide us with a criterion for resolving simple objects in complex objects.

Supporting Wittgenstein's view on the contradictory, an analytic status of colour exclusion chooses an argument which recurs to the analysis of *transformational laws* which rule simple and complex objects.

These laws establish links between objects (a) and links between atomic propositions (b). As regards (a) a link between objects (and names) such as "Red(x):=~Blue(x)"; as regards

(b) a link between atomic propositions such as "a proposition contains

'Red(x)' → the same proposition cannot contain 'Blue (x)'".

"Red(x):=~ Blue(x)" is an example of what Wittgenstein calls in 6.3751 the "logical structure of colour"; but this example, as argued by Ciuni, does not solve the problem of colour exclusion.

If "R(p)t.B(p)t" had an analytic or a priori character, then it would lead to a proposition like "~B(p)t.B(p)t", that is a logical proposition. By this way, the *Tractatus* would be right in stating that "R(p)t.B(p)t" is a contradiction. However, if we argue in *extensional terms* (as it were, the way of reasoning adopted by Wittgenstein in the *Tractatus*), the truth conditions of being red are not the same as those of not being blue, since something could be not blue and be anyway not red (i.e.,yellow). Therefore "Red(x)↔~ Blue (x)" does not support the conjecture considered in (a).

As regards b), an important reason to refuse it, is that such an assumption, if accepted, would anticipate the idea of *internal relations* which Wittgenstein adopted as a new perspective afterwards and in some opposition to the theories contained in *Tractatus*.

Accepting b) would imply introducing a "*linked to content*" constraint, for the logical structure of objects would depend on properties and relations that hold for a certain domain of objects and not for another: in phenomenological terms, it would concern *material a priori* propositions.

This assumption then would be in contrast with the purely formal character of the contradiction whose falsehood does not depend on the kind of object considered.

Therefore, with regard to the colour exclusion problem , we are confronted with a conflict between something that is considered *a priori* (in virtue of his impossibility) and at the same time something (the same) which, according to the criteria of the *Tractatus*, cannot satisfy the requirements of being a contradiction: to some extent, a conflict between the *analytical* and the *synthetical* character of the proposition.

In fact it's impossible to consider R(p)t.B(p)t as a contradiction, since it is not false for *every substitution instance* (Bolzano's principle).

The solution to this impasse could be to consider propositions like those concerning colours as examples of a *universal validity for a certain domain*, as far these kind of propositions keep their truth-value in every substitution instance *only* with individual and predicative constants of the same kind.

2. Synthetic a priori laws

The above sketched solution is adopted by the phenomenological approach, particularly by Husserl in the *Third Logical Investigation*, where he introduces the notion of "syntethische Gesezten a priori".

According to Husserl, a synthetic a priori law is a " pure law, which includes material concepts, so as not to permit of a formalization of these concepts *salva veritate* "[7]

Content concepts (*Sachhaltige Begriffe*) are concepts whose character is not purely formal: while formal concepts deal with the empty ideas of *something* and *object*, so that the axioms that express their use are *ontological-formal*, on the contrary material concepts are gathered around different categories, *genera*, which concern different kinds of objects, different kinds of states of affair (*Sachhalten*). Husserl explicates the notion of „logical form" as:

Concepts like Something, One, Object, Quality, Relation, Association, Plurality, Number, order, ordinal Number, Whole, Part, Magnitude etc., have a basically different character from concepts like House, Tree, Colour, Tone, Space, Sensation, Feeling etc., which for their part express genuine content. Whereas the former group themselves round the empty notion of Something or Object as such, and are associated with this through formal ontological axioms, the latter are disposed about various highest material Genera or categories, in which *material ontologies* have their root. This cardinal division between the ‚formal' and the ‚material' spheres of Essence gives

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us the true distinction between the *analytically a priori* and the *synthetically a priori* disciplines (or laws and necessities).[8]

Husserl, as it were, *enlarges* and *enriches* the notion of "logical form" which in Wittgenstein is firmly tied up to Bolzano's criterion based on the keeping of the truth-value in every substitution-instance; he, however, preserves this criterion even if the introduction of the notion of "formal" seems more articulated in comparison with its use in the past.

Wittgenstein, like Schlick[9], would not admit the phenomenological notion of "formal", considering his concept of logical truth tied up to tautology.

That is the reason why they (Wittgenstein and Schlick) use the examples which are not suitable to capture completely this notion[10], in order to explain the Husserlian notion of "material a priori".

The examples like "every note has a pitch" (Schlick) or "every rod has a length" (Wittgenstein) cannot be considered as *material a priori* propositions insofar, in doing so, we would misunderstand Husserl's real intentions; in Husserl's point of view, as it were, material a priori propositions are propositions like "there is not a colour without extension" or "there is not a pitch without a duration".

Why does this misunderstanding arise?

Husserl distinguishes between *conjoined* and *disjoined* parts: conjoined parts have at least a part in common, while disjoined parts have nothing in common with regard to their content: if, for example, we consider the genus "colour" and the specie "red", we can assume that they are *conjoined*, for the genus "colour" is a part (*intensional*) of the specie "red"; on the contrary, "extension" does not belong, as a part, to the genus "colour": "extension", as a matter of fact, makes "colour" part of a more inclusive whole which is called "coloured surface"; only this whole has as its parts both "colour" and "extension"; "extension" then, according to Husserl, is not a part of the genus "colour".

Husserl supports the idea as follows:

In the unity of a sensory phenomenon we can perhaps discover a wholly determinate "moment" of redness as well as the generic "moment" of colour. Colour and determinate redness are not, however, disjoined "moments". Redness on the other hand, and the extension that it covers, are such disjoined moments, since they have no community of content. They have, we may say, a

mutual association in the widest sense of the word; we have here a general relation of parts which is that of disjoined parts of a whole, an association of such parts. It now seems appropriate to call the associated parts *members* of the association: but to give so wide a sense to talk about members of a whole, means to count colour and shape as the associated parts of a coloured expanse[11].

On the ground of these considerations, note and pitch are not disjoined parts because it is thanks to a pitch that a note is different from a noise.

For Husserl, every relation of *dependence* or *independence* between contents is a relation which holds good only of disjoined parts.

Conjoined parts, as a matter of fact, are so strong mutually interwoven that it has no sense to think of their non-independence; *material a priori*, therefore, describes only non independent connections which cannot be understood as joined parts.

It is only because of the *disjunction* between parts that the empirical judgements as well as the material a priori ones can be called "synthetic".

Examples like "every rod has a length" or "every note has a pitch" are not apt to be subsumed under *material a priori* propositions: in Husserl point of view, only propositions like "there isn't a colour without extension" or "there isn't a pitch without a duration" get the problem of the material a priori in the right perspective; the parts which constitute this kind of contents lie, as matter of course, at the same level.

Consider the argument adopted by Wittgenstein once more: we assume that a proposition like "an object cannot be red and green at the same time" is a synthetic judgment and that the word "cannot" means a *logical impossibility*; we know that every proposition is the negation of its negation and therefore it is correct to formulate the proposition "an object can be red and green at the same time". If we maintain the first assumption, the last proposition turns out as a synthetic one; as synthetic it has sense and this means that the situation described by it *can* exist; but if we admit that "cannot" means a logical impossibility, we arrive at the conclusion that the impossible is possible.

The problem arises, according to Wittgenstein, when from the *fact* that a proposition has a sense we infer the *possibility* of its existence; for Husserl the negation of a synthetic a priori proposition (e.g. "there isn't a colour without

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extension") has its sense even if the situation which this proposition describes cannot subsist.

3. Wittgenstein's colour concept

The concept of colour recurs persistently in Wittgenstein's philosophy; in the *Tractatus* he introduces not only the notion of "colour-space", that appears in his later writings, but he also regards colour as one of the *forms* of objects.[12]

Wittgenstein's remark that colour is the form of the object confirms the surmise that what he means by colour is not what we can know by means of physical or chemical examination, but what we know *immediately* from experience: just as we cannot perceive a stick without a length, thus

we cannot imagine an object without a visual field; the approach seems here to be a phenomenological one. Colour is one of the *built-in* logical forms in our immediate experience.

According to this point of view, it is the *structure* of colour, its logical form, that determines the impossibility of a point in visual space having two different colours at the same time: the analysis of colour thus becomes a conceptual one, not a physical, physiological, or psychological one.

A phenomenological colour theory is "a theory in pure phenomenology in which mention is only made of what is actually perceptible and in which non hypothetical objects occur"[13].

Wittgenstein's aim is to reveal the logical structure of colours, avoiding to add any hypothetical elements of physics; this conceptual analysis is based on colours in *colour-space*. Wittgenstein thinks that the usual and familiar way of representing colours is misleading, because it would be based on the *colour-circle* notion which lays down some difficulties as noted by Wittgenstein in his *Philosophical Remarks*:

At any rate, orange is a mixture of red and yellow in a sense in which yellow isn't a mixture of red and green, although yellow comes between red and green in the colour circle[14].

In the "colour-circle" frame in fact, orange lies between red and yellow, and yellow between red and green; but we do not produce yellow by mixing red and

green, as we produce orange from red and yellow: the two colours obey to different *grammatical laws*, so that the colour-circle is inappropriate to represent correctly the colours structure. For this reason, Wittgenstein proposes to use the *colour-octahedron* scheme for the right representation of colours we immediately experience.

The *colour-octahedron* is a good candidate for representing the colour-space, since it shows the correct grammar pertaining to the logical structure of colours; this representation cannot be established empirically by experiment, because it has an *a priori* status:

An octahedron with the pure colours at the corner-points e.g., provides a *rough* representation of colour-space, and this is a grammatical representation , not a psychological one. On the other hand, to say that in such and such circumstances   you can see red after-image (say) is a matter of psychology. (*This* may, or may not, be the case- the other is *a priori*: we can establish the one by experiment but not the other.)[15]

With reference to the inappropriateness of the *colour-circle* to represent all the grammatical forms embodied by colours, Wittgenstein says that the two statement "Orange lies between red and yellow" and "Red lies between violet and orange" involve two different grammatical usages of the word "between". Using the *colour-circle*, we are misled to think that there is a *uniform transition* from colour to colour, so that the two different usages of the word "between" become not understandable.

For example, in the case of primary colours, we do not have an image of a continuous transition, for we see only the discrete hues; moreover, we cannot produce the primary colours by mixing other intermediate colours.[16]

For Wittgenstein, it is fruitful to produce a better representation of colours, drawing a square which distinguishes four "corner-points" where we can locate the primary colours: *blue*, *green*, *yellow* and *red*; if we add to the previous square black and white, we are naturally driven to use an *octahedron* whose bottom and top corner-points would represent black and white respectively. The latter colours, as a matter of fact, are radically different, as regards their grammatical form, from the other ones.

Wittgenstein's concern is here, as stated above, a grammatical one: grammar, in this context, replaces his early-period concept of logic; but grammar in the case of colours seems susceptible to phenomenological considerations, as is suggested by the following remarks:

The words 'Colour', 'Sound', 'Number' etc. could appear in the chapter headings of our grammar. They need not occur within the chapter but that is where their structure is given.[17]

Is not, to make an example, the theory of harmony, at least, in part *phenomenology* and in part *grammar*?

The theory of harmony isn't a matter of taste.[18]

The way in which musical notes are combined to produce a chord is not a matter of taste, but is somehow already built into each note.

Grammar and phenomenology have in cases like this the same function for the fact that they allow some combinations of words, while excluding other combinations as nonsense: it is a nonsense to say that one colour smells or that a colour is a tone higher than another.

Another grammatical example is provided by Wittgenstein's denial to apply the words "closer to" and "further from" to colour concepts.[19] It is important to underline once more that by talking about colour, Wittgenstein uses a logical analysis of colour concepts based on colour-space:

The specific effort made for this by him is to find the better, if not the right, representation of colour-space. In fact, Wittgenstein sees that the colour-octahedron, in contrast to the colour-circle, is a grammatical representation of colour-space.[20]

For the Wittgenstein of the early period, colours are objects with logical forms: logical forms are given together with objects; in other words, objects have a *built-in* feature of logical forms. All we need is thus to experience objects. Wittgenstein's rejection of separate logical forms allows the reduction of all the logical forms to the logical forms of simple objects: all the complex logical forms have to be built out of the logical forms of simple objects. Between logical forms

and facts there is an *isomorphic relation*: the basic idea of Wittgenstein's *picture theory* is that an elementary proposition is a picture of reality by being an isomorphic copy of the corresponding state of affairs.

However, what about complex propositions? Wittgenstein has to explain how we understand complex propositions as pictures of reality, extending his picture theory, applied initially to elementary propositions, to all propositions. The solution adopted by Wittgenstein is the *truth-function theory* as expressed explicitly in proposition 5 of the *Tractatus*:

A proposition is a truth-function of elementary propositions.

Returning to the colour issue of the early Wittgenstein, the logical forms of colours determine the way in which colours are combined in our experience; the vocabulary of colour terms is based on the acquaintance with colours in visual space. Colours are for the early Wittgenstein phenomenological objects because they have *built-in* logical forms within themselves: colour-incompatibility, as pointed above, is a phenomenological question; for the same reason there is a great difference between *physical impossibility* and *logical impossibility*.

In the *Blue Book* Wittgenstein asserts:

Let us think straight away of a similar case: "The colours green and blue can't be in the same place simultaneously." Here the picture of physical impossibility which suggests itself is, perhaps, not that of a barrier : rather we feel that the two colours are in each other's way. What is the origin of this idea?- We say three people can't sit side by side on this bench; they have no room. Now the case of the colours is no analogous to this: but it is somewhat analogous to saying: "3x 18 inches won't go into 3 feet." This is a grammatical rule and stats a logical impossibility.[21]

Once again Wittgenstein here is concerned with phenomenology and not with physics: as it were, with what we *immediately* know without any empirical testing. Finding by means of grammatical investigations of language, the logic that lies behind immediate experience, we put forward the assimilation of grammar to phenomenology.

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Even if Wittgenstein rejects phenomenological language, he still believes that a phenomenological analysis remains possible, for language still mirrors reality, even if in a different way compared to the *Tractatus*.

Wittgenstein explains the rules of the use of language as follows:

The investigation of the rules of the use of our language, the recognition of these rules, and their clearly surveyable representation amounts to, i.e. accomplishes the same thing as, what one often wants to achieve in constructing a phenomenological language.

Each time we recognize that such and such a mode of presentation can be replaced by another one, we take a step toward that goal.[22]

4. The use of the term "phenomenology" in Wittgenstein's works

According to Jaakko Hintikka, the use of the term "phenomenology" in Husserl and in Wittgenstein has a common source: the term at stake had an established usage in the early decades of the 20th century in the philosophy of physics according to which science ought to deal only with observable objects, rejecting pure concepts.[23]

Husserl acknowledges himself that his phenomenology can be considered as a *radicalisation* of Mach's phenomenology[24]: the affinity ,as regards the idea of phenomenology, between Husserl and Mach is never been emphasized.

Hintikka contends that it can be demonstrated that Wittgenstein is familiar with this sense of the term "phenomenology": for instance, the Austrian philosopher possessed several volumes of Boltzmann's writings who used the very word "Phänomenologie".

Wittgenstein's early philosophy however was, in some sense, a result of the revision of Russell's theory of acquaintance achieved by omitting logical forms from the range of objects of acquaintance; in addition to this, it would be a misunderstanding to assimilate the simple objects contained in the *Tractatus* with physical atoms: simple objects, as a matter of facts, are basic entities directly given to us.

Like Boltzmann and Hertz, the Austrian philosopher was concerned primarily with the *representation* of the given reality in thought and in language; Boltzmann, for example, referred to those representations as "pictures" (*Bilder*).

Wittgenstein kept up with the ideas of Boltzmann and Hertz, while considering the possibility of solving conceptual problems by devising a *suitable notation*: this is the case of the above mentioned problem of colour incompatibility.

Proposition 6.3751 of the *Tractatus* asserts:

For example, the simultaneous presence of two colours at the same place in the visual field is impossible, in fact logically impossible, since it is ruled out by the logical structure of colour.

Let us think how this contradiction appears in physics: a particle cannot have two velocities at the same time; that is to say, it cannot be at two places at the same time; as a matter of fact, particles that are in different places cannot be identical.

It has been recognized that here Wittgenstein's reference to physics serves to *explain* rather than to *solve* colour incompatibility: he aims, as it were, at the development of a notation capable of turning colour incompatibility into a *tautology*. According to Hertz, the first task of a physicist is to develop a system of concepts ("images") regulated by laws which govern the phenomena they represent.

It is also worth stating the fact that, according to the Austrian philosopher, reality is phenomenological; this implies that reality determines how it ought to be represented: a correct notation, if possible, could represent perfectly reality, rendering the question about the adopted methods idle.

According to Jaakko Hintikka, Wittgenstein's philosophical development in 1929 was the replacement of the phenomenological language given in *Tractatus* by an everyday physicalistic language as the only possible language in philosophy.

In the first section of *Philosophical Remarks* Wittgenstein states:

I do not now have phenomenological language, or "primary language" as I used to call it, in mind as my goal. I no longer hold it to be necessary[25].

Wittgenstein goes further, affirming that a phenomenological language is not possible; there is a formulation in Waismann's *Ludwig Wittgenstein and the Vienna Circle*, which is striking as to clear up the point above:

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I used to believe that there was the everyday language that we all usually spoke and a primary language that expressed what we really knew, namely phenomena. I also spoke of a first system and a second system. Now I wish to explain why I do not adhere to that conception any more. I think that essentially we have only one language, everyday language.[26]

From the quoted passages above, we could argue that Wittgenstein, starting from 1929, was concerned with a change of the language paradigm.

Calling for further explanations, we have to ask whether or not there is any difference between an *everyday language* and a *physicalistic language*. The answer is very clear:

The propositions of our grammar are always of the same sort as propositions of physics and not of the same sort as the "primary" propositions which treat of what is immediate.[27]

The change of the language paradigm however does not mean for Wittgenstein to give up the initial goals of his philosophical enterprise.

It is worth noting that albeit a comparison with the *Tractatus* shows little difference as regard the switching of the language paradigm towards a phenomenological basic language, Wittgenstein, however does not speak anywhere in the *Tractatus* or in the *Notebooks* 1914-1916 of a "primary language" or a "primary system": a term like "primary system" is used by Wittgenstein in *Philosophical Remarks*.[28] It may be supposed, according to Hintikka, that Wittgenstein uses these terms while discussing with members of the Vienna Circle.

However, in the *Big Typescript* it is shown that even if Wittgenstein is no longer engaged in a construction of a phenomenological language, he nevertheless is interested in the same phenomenological problems as before.

Of particular interest is his assertion that "phenomenology is grammar"; this identification of phenomenology and grammar will play a great role also in *Remarks on Colour*[29].

Wittgenstein's rejection of all natural hypotheses and theories affords him the access that he needs for the phenomenological descriptions of time, space and colour.

A phenomenology of time is radically different from the physics of time; analogously, a phenomenology of space gives us the evidence of the fact that objective, physical space is a *construction* based on subjective, visual space. Therefore, a phenomenological investigation of space would isolate space from its owner, from the sense organs, and from all the physical theories of space. For this reason phenomenological geometry will not be Euclidean (nor Riemannian, etc.): phenomenology is not interested in the validity of this or that theory, but in the general structure of experience *as a whole*.

In *The Big Typescript* Wittgenstein asserts:

The geometry of our visual space is given to us, i.e. finding it doesn't require an investigation hitherto hidden facts. In the sense of a physical psychological investigation, our isn't one at all. Nevertheless, one can say that we don't yet know this geometry. This geometry is grammar, and our investigation is a grammatical investigation.[30]

Taking a step forward, we find in the same chapter of the *Big Typescript*:

One could talk almost about an external and internal geometry. What is arranged in visual space is situated in this *kind* of order *a priori*, i.e. by virtue of its logical nature, and in this case geometry is simply grammar. What the physicist puts in relation to each other within the geometry of physical space are readings from instruments that, by virtue of their *internal* nature, are no different whether we are living in a flat or a spherical physical space. That is to say, it isn't an investigation into the logical properties of these readings that leads the physicist to an assumption about the nature of physical space, but the facts that he has read off.[31]

Making phenomenological research, we are not concerned with *facts*, but only with *possibilities*:

here, according to Nicholas Gier[32], the closeness of Wittgenstein to the last Husserl.

Wittgenstein's realization that colour incompatibility cannot be reduced to formal, logical contradiction has prompted some interpreters to see the work *Remarks on colours* as something very close to a disintegration of the *Tractatus*. Peter Hacker explains this idea as:

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...Wittgenstein's first philosophy collapsed over its inability to solve one problem- colour exclusion. Once the intractability of this problem became clear, the main struts of the whole system collapsed.[33]

Another interpreter like Anthony Kenny, however, admits that the apparent mixing of the logical and the empirical entailed by the recognition of a *logic of colour* may be seen indeed only as the development of Wittgenstein's holding that the truth-functional logic of the *Tractatus* is fundamentally an applied one: logic in *Tractatus* is not cut off from the world, since it has to recognize the existence of something or the being of facts.

By acknowledging the existence of a colour-space, Wittgenstein strengthened the essential connection between *logical syntax* and its *application* in the description of empirical states of affairs.

Holding this point of view, Wittgenstein's later conception of logical syntax can be seen as a widening rather than an abandonment of his earlier view:

Against Wittgenstein's new view [of logical syntax] Schlick protested that the truth functional constants seemed to be more essential to language than the particular rules of syntax. The possibility of constructing conjunctive propositions, he said, seemed to be a much more general, all-embracing fact than the rule of syntax that red and blue could not be in the same place. But Wittgenstein replied that he thought there was non crucial distinction here. The rules for the truth-functions were not to be separated from other rules of syntax. "Both" he said "belong to the method of depicting the world".[34]

However, according to Marie Macginn, Wittgenstein's commitment to the independence of elementary propositions in *Tractatus* counts as a commitment to the purity of logic; therefore it is difficult to make completely compatible this position with the later positions which insist more on the applicability of logic: recognizing that colour exclusion cannot be reduced to a formal contradiction, Wittgenstein takes a closer step towards the persuasion that a pure formal logic is a *myth*.

Indeed, the central distinction between system of representation and its application, put in other words, between form and content, remains intact in the

later works of Wittgenstein, even if the concept of form is transformed into *social or cultural constraints*.

Therefore, we can admit that there is a certain continuity in Wittgenstein's development, at least as regards to the problems which are at stake when we confront language with the world.

While tackling the problem of colour exclusion in *Some Remarks on Logical Form*, Wittgenstein is still persuaded that logic does not deal with the internal construction of elementary propositions:

We can only arrive at a correct analysis [of elementary propositions] by, what might be called, the logical investigation of phenomena, i.e. in a certain sense a posteriori, and not by conjecturing about a priori possibilities.[35]

In other words, Wittgenstein no longer believes that analysis would arrive at elementary propositions that are logically independent; on the contrary, we can assert *a priori* that there are *internal* or *hierarchical* relations that exist between elementary propositions belonging to particular logical fields: i.e. propositions which deal with space, colours, sounds etc.

Moreover, he believes that such a hierarchical relationship is to be envisaged in terms of the hierarchy of the number system:

For their representation numbers (rational and irrational) must enter into then structure of the atomic propositions themselves.[36]

Colour propositions, in this view, are founded on *a pure, a priori hierarchy* analogous to that which determines the scale for measuring length; for this reason, elementary propositions of colour are related reciprocally in an analogous way to that which holds for propositions about lengths: propositions like "A is 1.5 metres tall" and "B is 1.9 metres tall".

According to this point of view, the colour exclusion problem can be cleared as follows:

It is a characteristic of these properties that one degree of them excludes any other. One shade of colour cannot simultaneously have two different degrees of brightness or redness, a tone not two

different strengths, etc. And the important point here is that these remarks do not express an experience but are in some sense tautologies.[37]

At this point of analysis, Wittgenstein manifests the clear conviction that, admitted the completeness of the analysis of colour propositions, such nonsensical constructions like "A is red and A is green" may be avoided by virtue of the symbolism which expresses the propositions themselves.

Wittgenstein explicates:

These [rules of syntax] will have to tell us that in the case of certain kinds of atomic propositions described in terms of definite symbolic features certain combinations of the T's and F's [in the truth-table] must be left out.[38]

This early response to the problem of colour exclusion keeps the myth of a pure a priori still alive, that is to say, the myth of a pure formal syntax able to make clear the internal connections between propositions.

However, the idea of a colour-scale represents a development as regards the *Tractatus* conception of the logic of our language.

As Marie Mcginn explains:

The system of logical syntax that is embedded in our language is now seen to be ineluctably tied up with the existence of descriptive conventions (specifically properties of degree) whose application is a matter, not merely of there being a world, but of our employing particular modes of describing it. Logic has, in a sense, become more closely tied up with the world than it is in the excessively pure conception of the *Tractatus.*[39]

In this view, *Some Remarks on Logical Form* can be acknowledged as the first step on the road from logic to grammar.

By the end of 1929, the notion of elementary proposition deals no more with the idea of a complete analysis, but simply with *surface properties* of propositions; with regard to the system of colours, Wittgenstein believes that it has no longer the same *multiplicity* as lengths: we cannot, for example, say how many degrees

closer to red one orange is than another. The number system therefore is no more the real ground of the internal relations that exist between colours.

Wittgenstein's rejection of the completeness and importance of analysis goes along with his abandoning the idea of an *essence of depiction*.

In *Philosophical Investigations*, he remarks:

The preconceived idea of crystalline purity can only be removed by turning our whole examination round. (One might say: the axis of reference of our examination must be rotated, but about the fixed point of our real need)[40].

In this new approach to the logic of language, Wittgenstein has come to see that its essence cannot be something *universal* or *pure* lying behind all systems of representation: the way by which the language does work is "in plain view" and manifest in the everyday use of language. What it matters is aiming at a clear view of the grammar that the everyday use of language makes evident.

In the *Tractatus*, on the contrary, Wittgenstein synthesizes his conception of logic with the following words:

Thought is surrounded by a halo.- Its essence, logic, presents an order, in fact the a priori order of the world: that is, the order of possibilities, which must be common to both world and thought. But this order, it seems, must be utterly simple. It is prior to all experience, must run through all experience; no empirical cloudiness or uncertainty can be allowed to affect it- It must rather be of the purest crystal. But this crystal does not appear as an abstraction; but as something concrete, indeed, as the most concrete, as it were the hardest thing there is.[41]

5. Remarks on colours

After having introduced some issues concerning colours, we can begin investigating all the philosophical problems connected with the work *Remarks on colours* written by Wittgenstein in the years 1950-1951.

In this text, more than in others, philosophy turns out to be an *accurate* and *local* analysis of the different uses of languages; he doubts whether a too generalised investigation of philosophical problems might allow to clarify the puzzles that emerges when we encounter the great variety of phenomenon which makes up the

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reality; instead of it, it may be more reliable a method which doesn't resolve *the friction* of the reality in theories which, in virtue of their pureness, lose every contact with the world.

It is an operation of *intellectual desublimation* which invests every field of culture: we must, according to Wittgenstein, avoid to transfigure the phenomenon belonging to our *Lebenswelt* idealizing and objectifying them in some abstracts and a priori; on the contrary, we have only to check the real and effective conditions of that phenomenon, of that *Lebensformen*, as Wittgenstein would have said.

We have to think less and to attend more at the real world; philosophy does not aim anymore to bring hypothetical arguments, but to trace out descriptions of the investigated phenomenon.

Wittgenstein clarifies his ideas about philosophy in the *Philosophical Investigations* as follows:

Philosophy may in no way interfere with the actual use of language; it can in the end only describe it.

For it cannot give it any foundation either.

It leaves everything as it is.

It also leaves mathematics as it is, and no mathematical discovery can advance it. A "leading problem of mathematical logic" is for us a problem of mathematics like any other.[42]

He adds also:

It is the business of philosophy, not to resolve a contradiction by means of a mathematical or logico-mathematical discovery, but to make it possible for us to get a clear view of the state of mathematics that troubles us: the state of affairs *before* the contradiction is resolved. (And this does not mean that one is sidestepping a difficulty.)

The fundamental fact here is that we lay down rules, a technique, for a game, and that then we follow the rules, things do not turn put as we had assumed. That we are therefore as it were entangled in our own rules.

This entanglement in our rules is what we want to understand (i.e. get a clear view of).

It throws light on our concept of *meaning* something. For in those cases things turn out otherwise than we had meant, foreseen. That is just what we say when, for example, a contradiction appears: "I didn't mean it like that."

The civil status of a contradiction, or its status in civil life: there is the philosophical problem.[43]

Wittgenstein concludes:

Philosophy simply puts everything before us, and neither explains nor deduces anything.- Since everything lies open to view there is nothing to explain. For what is hidden, for example, is of no interest to us.

One might also give the name "philosophy" to what is possible *before* all new discoveries and inventions[44].

Philosophy then might not work out a logical-mathematical contradiction, but clarify the "civil state" of the contradiction or its condition in the civil world: every form of knowledge, even the more sophisticated, as a matter of course, is always rooted in our worldly praxis, in our, Husserl would have said, *prepredicative commercium* with our environment.

Wittgenstein points out in *The Blue Book*:

Now what makes it difficult for us to take this line of investigation is our craving for generality. This craving for generality is the resultant of a number of tendencies connected with particular philosophical confusions. There is-

(a) The tendency to look for something in common to all the entities which we commonly subsume under a general term.- We are inclined to think that there must be something in common to all games, say, and that this common property is the justification for applying the general term "game" to the various games; whereas games form a *family* the members of which have family likeness.[...]

(b)There is a tendency rooted in our usual forms of expression, to think that the man who has learnt to understand a general term, say, the term "leaf", has thereby come to possess a kind of general picture of leaf, as opposed to pictures of particular leaves.[...]

(c)Again, the idea we have of what happens when we get hold of the general idea "leaf", "plant", etc. etc., is connected with the confusion between a mental state, meaning a state of a hypothetical mental mechanism, and a mental state meaning a state of consciousness (toothache, etc.).

(d)Our craving for generality has another main source: our preoccupation with the method of science. I mean the method of reducing the explanation of natural phenomena to the smallest possible number of primitive natural laws.[...]Philosophers constantly see the method of science before their eyes, and are irresistibly tempted to ask and answer questions in the way science does. This tendency is the real source of metaphysics, and leads the philosopher into complete darkness. I want to say here that it can never be our job to reduce anything to anything, or to explain anything. Philosophy really *is* "purely descriptive".[...]

Instead of "craving for generality" I could also have said "the contemptuous attitude towards the particular case".[...]

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The idea that in order to get clear about the meaning of a general term one had to find the common element in all its applications has shackled philosophical investigations; for it has not only led to no result, but also made the philosopher dismiss as irrelevant the concrete cases, which alone could have helped him to understand the usage of the general term. When Socrates asks the question, "what is knowledge?" he does not even regard it as a *preliminary* answer to enumerate cases of knowledge.[45]

The problem that at this point of our analysis arises is whether the issues concerning colours constitute a relevant context of philosophical questions: colours questions are relevant, in my point of view, because they clear up very important problems of the philosophical and epistemological reflection, such as the kind of relation between logic and experience, or language and perception, or the possible relation between grammatical and empirical propositions.

For example, Wittgenstein starts his enquiry on colours, bringing to the light the linguistic misunderstandings tied to propositions which have apparently the same logical form, even if their *deep grammar* makes these propositions very different one from the other.

To report e.g. whether a body is lighter or darker than another is very different from stating the relationship between the lightness of certain shades of colour, even if the form of the propositions here concerned is the same: "X is lighter than Y".

Wittgenstein stresses a language-game as:

A language-game: report whether a certain body is lighter or darker than another.- But now there's a related one: State the relationship between the lightness of certain shades of colour. (Compare with this: Determining the relationship between the lengths of two sticks- and the relationship between two numbers.)- The form of the propositions on both language-games is the same: "X is lighter than Y". But in then first it is an external relations and the proposition is temporal, in the second it is an internal relation and the proposition is timeless.[46]

Here we are concerned with linguistic misunderstandings, in other cases Wittgenstein attends to the riddles which pertain to the relation between perception and language (or thinking).

An example which gets clear of the relation between perception and language is the following one:

I see in a photograph (not a colour photograph) a man with dark hair and a boy with slicked-back blond hair standing in front of lathe, which is made in part of castings painted black, and in part of smooth axles, gears, etc., and next to it a grating made of light galvanized wire. I see the finished iron surfaces as iron-coloured, the boy's hair as blond, the grating as zinc-coloured, despite the fact that everything is depicted in lighter and darker tones of the photographic paper.[47]

About the analogy between colours and language-games or their inscription in forms of life, Wittgenstein writes:

Ask this question: Do you know what "reddish" means? And how do you show that you know it? Language-games: "Point to a reddish yellow (white, blue, brown)- "Point to an even more reddish one"- "A less reddish one" etc. Now that you've mastered this game you will be told "Point to a somewhat reddish green" Assume there are two cases: Either you do point to a colour (and always the same one), perhaps to an olive green- or you say, "I don't know what that means," or "There's no such thing."

We might be inclined to say that the one person had a different colour concept from the other; or a different concept of '…ish'.[48]

From the passage above we may argue that different men can have different concepts of colour, and when this happens then, according to Wittgenstein, these men live in different practical, theoretical contexts or *Lebensformen*. It could seem thus that it is impossible to find any *bridge-concepts* capable of assuring the translation or reduction of a concept belonging to a particular form of life to another one which is proper to a different *Lebensform*.

We would have in this hypothetical case people having a "different geometry of colour"; we find ourselves so in situations in which the common understanding is very difficult to yield:

There may be mental defectives who cannot be taught the concept 'tomorrow', or the concept 'I', no to tell time. Such people would not learn the use of the word 'tomorrow' etc..

Now to whom can I describe *what* these people cannot learn? Just to one who has learnt it? Can't I tell A that B cannot learn higher mathematics, even though A hasn't mastered it? Doesn't the person who has learned the game understand the word "chess" differently from someone who hasn't learnt it? There are differences between the use of the word which the former can make, and the use which the latter has learnt.[49]

The problem arisen at this point of the analysis grows further if we do not fix the kind of relation subsisting between colour-games and reality. In fact, if we admit that colours words point to the private sphere of the subject (like sensations), then the only way to verify if two subjects intend colour-words in the same way, is to attend to the   subjects' *use* of the same word in equal circumstances. No other warranty is allowed. But if the link between language-games and reality is totally interrupted, then we have no means of comparing words each other; this is a very crucial point to which Merrill and Jaakko Hintikka recur in their work *Investigating Wittgenstein*: have colours-concepts a *zero semantic*? According to them, no! Because of the fact that language-games like that of colours are basilar or *primitive* games on which all the other are grounded, if we don't permit any kind of link between word-colours and reality, then we expose the other higher games to the danger of being *inconsistent* or of being *nonsensical*.

According to Jaakko and Merrill Hintikka in fact, Wittgenstein seems to assert that all that matters in colour issues concerns *modes of behaviour*: all this implies that colour-language ought to be *public* and completely different from *colour-impressions*.

For instance, in *Remarks on Colour*, Wittgenstein, discussing the difference between a colour-blind and a normal person, writes:

The one can learn a language-game that the other one cannot. And indeed *this must* be what constitutes colour-blindness of all kinds. For if the "colour-blind" person could learn all the language-games of normal people, why should he be excluded from certain professions?[50]

From the passage above, we are inclined to assume that colour-blindness is not a question of colour experiences or impressions very different from those of normal persons, but merely a matter of difference in the language-games that one can learn while the other can't.[51]

But these are not Wittgenstein's last words concerning colour-language; indeed, he asserts explicitly that sets of concepts, like sensations and colours, *operate* in analogous ways:

I treat colour concepts like the concepts of sensations.[52]

The colour concepts are to be treated like the concepts of sensations.[53]

 The analogy looks wrong-headed and even *paradoxical*[54]*:* primary language-games which establish the semantical links between private sensations and the language by which we express them rely on spontaneous expressions of different sensations.

However, this is not the case of the colour-language: according to Wittgenstein we must, as a matter of fact, avoid every use of a psychological interpretation of colour issues; colours have any kind of effect (sensuous, moral,) on the subject who sees them.

Colour-language is e.g. radically different from *physiognomic* games: in which e.g. the verbal expression of pain replaces crying and does not describe it; it does mean that in physiognomic games the modes of behaviour, which render the game public, can be replaced by speech-acts. In the case of colour-words however, saying that their meanings consist in expressive or linguistic behaviour seems absurd:

Wittgenstein's favourite, albeit admittedly oversimplified, example of such a language-game is a game of colour comparisons played by means of colour samples or colour charts. The public framework (samples or charts relied on in such games) is of course nonlinguistic and nonbehavioural. Hence it may seem again that the analogy Wittgenstein sees between sensation-language and colour-language is spurious.[55]

With the parallelism between colour-words and sensation-words, Wittgenstein is interested in the searching for a public framework in which they both can be expressed; in this sense, we can understand why does Wittgenstein need a language-game in which colour-words play a role. Language-games, in fact, are always public in principle; according to this point of view, we can also understand why the *simplest* public framework for colour-words is represented by the physical colour samples. The analogy however between this kind of language-game and the physiognomic one demonstrates that the primitive game constituted by colour words cannot work if we want to avoid ridiculous consequences. For this reason, we have to search for another and better account of the grammar of

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colour-words; another candidate, relied on remembered colour-images, is sharply rejected by Wittgenstein:

But what if no such sample is part of the language, and we *bear in mind* the colour (for instance) that a word stands for? – "And if we bear it in mind then it comes before our mind's eye when we utter the word. So, if it is always supposed to be possible for us to remember, it must be in itself indestructible."- But what do we regard as the criterion for remembering it right?- When we work with a sample instead of our memory there are circumstances in which we say that the sample has changed colour and we judge of this by memory. But can we not sometimes speak of a darkening (for example) of our memory-image? Aren't we as much at the mercy of memory as of a sample? (For someone might feel like saying : "If we had no memory we should be at the mercy of a sample".)- Or perhaps of some chemical reaction. Imagine that you were supposed to paint a particular colour "C", which was the colour that appeared when the chemical substances X and Y combined.- Suppose that the colour struck you as brighter on one day than another; would you not sometimes say: " I must be wrong, the colour is certainly the same as yesterday"? This shews that we do not always resort to what memory tell us as the verdict of the highest court of appeal.[56]

How, then, may we describe the primary language-game played by colour-words? If we use the colour-sample game to describe the rules of the primary language-game instantiated by colour-words, we are wrong.

According to Wittgenstein as a matter of fact, there is not a lot to say about these rules: the language-game with colour-words does work only if the *colour-identification* is made correctly.

Rule-following is *constitutive* of the language-game in question, and nothing more can be said: a *language-game is played* and nothing more; primary rules are followed "blindly", "automatically" and "as a matter of course".

This is the reason why everyone is tempted initially to understand Wittgenstein's description of the language-game with colour-words as a *rejection* of inner experiences[57].

By emphasizing the analogy between "sensation concepts" and "colour concepts", we are forced to admit that in both language-games basic attributions are made without any further justification: people's verbal reactions to their colour experiences can be as spontaneous, primitive and automatic as their reactions to sensations.

Just as it is impossible, i.e. in a physiognomic language-game to make a distinction between having an impression and giving it its natural expression, for the same reason it would be impossible to drive a wedge between physical colours and colour-impressions.

Wittgenstein emphasizes this point by giving a striking analogy:

Someone paints a picture in order to shew how he imagines a theatre scene. And now I say: "This picture has a double function: it informs others, as pictures or words inform- but for the one who gives the information it is a representation (or piece of information?) of another kind: for him it is the picture of his image, as it can't be for anyone else. To him his private impression of the picture means what he has imagined, in a sense in which the picture cannot mean this to others."- And what right have I to speak in this second case of a representation or piece of information- if these words were rightly used in the *first* case?[58]

Taking this interpretative path, we do not find essential difference between sensation concepts and colour concepts even if we admit that colours have a *clearer structure* than sensations.

However, Wittgenstein never tells us what the language-games with colours are really like: this would depend, according to Jaakko Hintikka and Merrill Hintikka, on the "enormous complexity and subtlety" of this kind of language-game.

Remarks on Colours is then an attempt to deal with this irreducible *complexity*: we are confronted therefore with many *dimensions* by which the space of colours can be articulated: *proximity* (relating to the shade of a colour) vs. *distance*, *pure* vs. *impure* colours, *opacity* vs. *transparency*. In order to have a deeper investigation on colour-issues, we have then to connect colour-concepts with other concepts from the world of vision:

Because of this many-dimensional character of colour concepts, Wittgenstein follows his wonted strategy of merely assembling reminders of the relevant conceptual points concerning colours. We, too, have to be satisfied with the same.[59]

When we use colour-concepts or colour-words we have to do with *vague* concepts for which it's very difficult to achieve some sharpness or to draw boundaries; the task to draw sharp boundaries is due to logic, but not the everyday language.

Wittgenstein explains logic in *The Big Typescript* as:

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It is as if for certain games one draws a line right trough the middle of the playing field in order to separate the teams, but doesn't otherwise mark off the field, since this isn't necessary.

When Frege says that logic doesn't know what to do with vague concepts, this is true in so far it is precisely the sharpness of concepts that belongs to the method of logic. That is what the expression "Logic is normative" can refer to.

[...]It is essential to logic to draw boundaries, but not such boundaries are drawn in the language we speak. But this doesn't mean that logic represents language incorrectly, or that it represents an ideal language. Its task is to portray a colourful, blurred reality as a pen-and-ink drawing.[60]

If we try to analyze colour-words, we cannot recur to "pen-and-ink" conceptual schemes even if some, as it were, "regularities", some unassailable truths (e.g. the *octahedron frame*) must be presupposed to match colour issues. In our attempt to describe uses of colour-words, we must admit 1)that some sentences are often used *on the borderline* between logic and the empirical; 2) that in philosophy it is not enough in every case to say something about an object, but also to learn *how* to speak about it.

And don't I have to admit that sentences are often used on the borderline between logic and the empirical, so that their meaning shifts back and forth and they are now expressions of norms, now treated as expressions of experience?

For it is not the 'thought' (an accompanying mental phenomenon) but its use (something that surrounds it), that distinguishes the logical proposition from the empirical one.[61]