A NEW APPROACH TO THE INTERPRETATION OF WITTGENSTEIN'S TRACTATUS LOGICO-PHILOSOPHICUS

by

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being a dissertation submitted to the University of St. Andrews in application for the degree of Bachelor of Philosophy of that University.

Introduction:

I was admitted to the University of St. Andrews, St. Salvator's College, Faculty of Arts, in October, 1965 in accordance with St. Andrews Ordinance No. 12, as a Research Student. I was admitted to candidacy for the degree of Bachelor of Philosophy with effect from 1 October 1965, in accordance with St. Andrews Ordinance No. 50. In pursuit of my studies for this degree I have been a matriculated student of the University of St. Andrews in each of the academic years 1965-66 and 1966-67. I have spent the three terms of 1965-66 and the final term of 1966-67 resident in St. Andrews as a full-time student. I have spent the first two terms of 1966-67 resident in London as a full-time student, affiliated with Birkbeck College, London as an 'External Student'.

I hereby certify that the material presented in this dissertation is wholly my own, where not otherwise acknowledged, and that none of this material has been presented in any previous application for a Degree.

David S. Schwarz.

I hereby certify that Mr. David S. Schwarz was admitted as a full-time Research Student for the degree of Bachelor of Philosophy, with effect from 1 October 1965: that he has been a matriculated student of the University of St. Andrews in each of the academic years 1965-66 and 1966-67: that he has pursued the study of his approved topic for the requisite number of terms, and during his terms of residence has devoted his whole time to that study, to my entire satisfaction as his Adviser: and that the conditions of the appropriate Ordinances have been fulfilled. The Ordinances referred to are:-

(a) University Court Ordinance 277 (St. Andrews No. 50) dated 29 June 1951.

(b) Ordinance 350 of the University Courts of the Universities of St. Andrews, Glasgow, Aberdeen, and Edinburgh (General No. 12) dated 12 September 1960: the latter superseding the previous Ordinance No. 61 (General No. 23) of the Commissioners appointed under the Universities (Scotland) Act 1889.

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Introduction

In this thesis I will deal with the Tractatus account of propositions which are pictures - what I will call 'picture-propositions'. Since Wittgenstein does recognize the distinction between a proposition and the proposition's various expressions, and since - as it will turn out (see infra, chapt. 1, sect. III, appendix) - all propositions can be expressed, at least ideally, as, or in terms of, picture-propositions, it would be more precise to say that my interest here is in picture-propositional expressions of propositions, expressions in which the propositions are pictures. The picture-propositional expressions of propositions include, of course, the picture-propositions, and those propositions which are expressed in terms of picture-propositions. I will call the totality of the picture-propositional expressions, the 'picture-propositional language'.

In these terms, then, my treatment in this thesis of the Tractatus account of picture-propositional language will be twofold, consisting of:

1. a preliminary study - primarily expositional - of the nature of picture-propositional language, and
2. a determination - again primarily expositional - of the linguistic role which picture-propositional language plays with respect to ordinary discourse. This will be, minimally, a determination of whether ordinary discourse does or can involve the use of picture-propositional expressions.

I shall divide the thesis into two sections in the performance of these two tasks, devoting a section to each, and taking them in the order in which they are mentioned here.

Insofar as this thesis will represent 'a new approach to the interpretation of the Tractatus', as it advertizes itself in its title, it will do so in virtue of the second of its two parts. For, to my knowledge, the problem taken up here has not been explicitly approached before, although many of the considerations here will not be new, and the conclusion will hardly be surprising. With regard to the first part of the thesis, this will amount to an exposition of Wittgenstein's 'picture theory', and, as such will not really represent a new departure in Tractatus criticism. I justify this enterprise here in that, for lack of a definitive account of the picture theory (perhaps necessitated by the very nature of the Tractatus) there is always room for another approach on the same path. The account of the picture theory which I give is new in many details, although it owes much of its larger framework to existing works on the Tractatus. For the most part I shall not attempt to provide a comparison of my views with those of the established commentators, but will simply acknowledge here the influence of James Griffin, in Wittgenstein's Logical Atomism, Erik Stenius, in Wittgenstein's 'Tractatus', G.E.M. Anscombe, in An Introduction to Wittgenstein's Tractatus, and George Pitcher, in The Philosophy of Wittgenstein.

A final note: I have used the Pears and McGuinness translation of the Tractatus as my textual source, and in the following all of my Tractatus quotations will be from here. I will make reference to Tractatus passages by simply giving the number of the passage in brackets, e.g. '(1.21)', and where I wish to refer to just one or a few of the paragraphs of a passage, I will insert the paragraph number(s) in brackets just after the passage number e.g. '(2.0121(1))'.

Chapter 1 : The Picture-Propositional Language.

An account of picture-propositional language is primarily an account of the picture-propositions. Such an account divides naturally into three:

1. an account of the nature of the world as it will be described by the picture-propositions,
2. an account of the workings of picture-propositions, and, finally,
3. an account of the truth-functional nature of picture-propositions, in virtue of which they are related to, and provide the terms of expression for, the rest of picture-propositional language.

I will take up these divisions in this order in giving my exposition of the Tractatus discussion of picture-propositional language.

I. The World.

Wittgenstein's ontology is most easily considered in two parts: first, concerning the nature of the actual world, and, second, concerning the possibilities of the world, the possibilities from which any actual world will be instantiated.

A. The Actual World.

The actual world will consist, in some sense, of configurations of objects, objects being absolutely simple things.

1. The world is all that is the case.
2. What is the case - a fact - is the existence of states of affairs.

2.01. A state of affairs (a state of things) is a combination of

objects (things).

2.0272. The configuration of objects produces states of affairs.

2.02. Objects are simple.

Thus, to determine the nature of the actual world, we must determine,

1. the nature of these configurations of simples -, and

2. the sense in which the world 'consists' of these configurations.

1. The Configuration of Objects.

Probably the paradigm of a configuration of objects, is the spatial configuration of ordinary physical things. Thus we regard the pieces of furniture in a room as forming a configuration. These physical things have a full complement of attributes, i.e. shape, color, weight, hardness, density, etc., and they have this in virtue of being what I will call 'categorially complex', i.e. they are 'things' in many different senses - they are spatial things, colored things, dense things, etc. [1] I will argue that Wittgenstein's objects of configuration depart from these 'categorially complex' spatial things, and, if I am correct, his idea of configuration will depart from the paradigm as well - for, generally, our idea of configuration and our idea of objects of configuration are interdependent, and vary together.

The ordinary physical things are not objects because they are not simple. They are complex in virtue of their categorial complexity, and they would have this complexity even if they were, say, physically indivisible - because they have this complexity in virtue of being physical things at all. Wittgenstein's objects, on the other hand, must be categorially simple, for

they have no attributes:

2.0232 In a manner of speaking, objects are colourless.

If we now ask what these objects are, as categorial simples, the answer that suggests itself is that objects are just what normally serve as attributes. For, an attribute normally pertains to just one category, so that that which serves as the attribute will be a categorial simple. Thus, an object will be something like a color, or the duration, or the 'spatiality' (size-shape-position) of a physical thing.[2] I take this suggestion from 2.0131:

> A spatial object must be situated in infinite space. (A spatial point is an argument-place.)
>
> A speck in the visual field, though it need not be red, must have some colour: it is, so to speak, surrounded by colour-space. Notes must have <u>some</u> pitch, objects of the sense of touch <u>some</u> degree of hardness, and so on.

The point seems to be that an object of a given category must involve an attribute of that category. But, given that objects are categorially simple, it would seem that the only way the object could involve the attribute, would be to <u>be</u> the attribute, or, rather, to be that which serves as the attribute. It is important to keep the distinction between an attribute, and that which serves as an attribute, because 'attribute' connotes a role - and an object, as a categorial simple which <u>can</u> serve as an attribute, doesn't necessarily have to play this role. An object isn't an attribute, although it can serve as one.

The view that Wittgenstein's objects are 'attributables' is one contested by many <u>Tractatus</u> commentators. To defend this view, I will consider several fairly representative arguments in opposition to regarding objects as

attributables. The first two of these will have in common that they confuse Wittgenstein's talk of the role which objects play with his identification of the nature of the objects themselves.

a.) In her Retraction (Analysis 26, 2, December, 1965), Anscombe says of colors that they "must in any case each cover a plurality of objects, for as 'material properties' they are 'first formed by configuration' (2.0231). (p.35) Passage 2.0231 reads:

> The substance of the world can only determine a form, and not any material properties. For it is only by means of propositions that material properties are represented - only by configuration of objects that they are produced.

Anscombe is obviously reading the passage as saying that objects are not the sort of things which can serve as properties, because these are, rather, configurations of objects; and thus objects cannot be things like colors.

But the passage does not compel this reading. It could equally well be read as saying that objects do not function as properties unless they are configured with other objects. That is to say, an object only has the role of (material) property insofar as it is configured with other objects. And I think that this is the more plausible reading. For, the account which I have given of 'material property' does fit the idea of 'external property' - i.e. 'external property' refers to a role which an object plays (by itself or in conjunction with other properties) when in a configuration (see infra., p.19).[3] And, 'material property' seems to be synonymous with 'external property'. Although 2.0231 is the only Tractatus passage which mentions 'material properties', its synonymy with 'external properties' is fairly clear from the context in which it occurs. The context is one of contrast

between internal and external properties, and here material properties are contrasted with form - which is the same as internal properties (from putting together 2.0123(1), 2.01231, and 2.0141, we get: objects possibilities of occurrence in states of affairs = internal properties = form of an object, respectively). And if material properties are external properties, then the fact that my reading of this passage fits the idea of external properties would indicate that my reading is correct. And this reading does not yield the conclusion that objects are not attributables, but, if anything, just the opposite.[4]

This same point, that Wittgenstein's concern with a role of objects must not be mistaken for a concern with a characterization of objects, in 2.0231, can be made against Copi's argument on the basis of this passage. Copi, according to Pitcher (The Philosophy of Wittgenstein ('PW'), p. 115) 'proceeds to show that objects can be neither formal nor material properties, and hence cannot be properties at all.' Of course, objects qua objects aren't properties, but they aren't meant to be, since properties are linguistic roles objects can play. But this says nothing about whether objects are 'attributables', the question at hand.

b.) Pitcher, in this same book, gives an argument against universals as objects on the basis of Wittgenstein's suggestions for notation:

> ....if simple universals were objects, they would presumably be named by signs of such forms as 'f' and '𝔽' in fx and 𝔽(x,y), and each proposition of these forms would then be, like any elementary proposition, "a nexus, a concatenation of names." (T 4.22). But Wittgenstein denies that propositions of the form fx and 𝔽 (x,y) are concatenations of names; he asserts that they are rather functions of names. (T 4.24(2)). (PW, p.114)

since attributables might be classed as universals (see infra, pp.11-12)

this argument might be troublesome if it had any force. It does not, however, for there is no reason to assume that Wittgenstein would indicate a type distinction between particulars and universals by naming the former with, say 'x', 'y', and 'z', and the latter with 'f' and 'Φ'. If universals are objects, then they would be named with the symbols for names, viz. 'x', 'y', and 'z'; 'f' and 'Φ' are not names at all, but stand for functions (see 4.24); hence the fact that 'f' and 'Φ' are not used as names doesn't say anything at all about what names name. Pitcher recognizes that 'f' and 'Φ' stand for functions in the second half of the quoted paragraph, thus contradicting himself, for if these stand for functions, then they would not be names, and thus could not be used to name universals.[5]

c.) I deal, finally, with two miscellaneous arguments, oft maintained, which base themselves, respectively, on readings of two Tractatus passages which are not really supportable by the text. The first of these arguments is based on a reading of 4.123:

> A property is internal if it is unthinkable that its object should not possess it.
>
> (This shade of blue and that one stand, eo ipso, in the internal relation of lighter to darker. It is unthinkable that these two objects should not stand in this relation.)
>
> (Here the shifting use of the word 'object' corresponds to the shifting use of the words 'property' and 'relation'.)

The second parenthetical remark is read to say that the use of the word 'object' here is deviant, and on this basis it is argued that colors (or, rather, shades of color - see note 2) - and, presumably, attributables analogous to color in form - are not really objects in Tractatus theory.

However, a look at the German suggests that this reading, and, hence,

the argument, is based on an infelicity in translation. The key word is 'schwanken(en)' for which the translators have read 'shifting'. But this is not quite correct, for the word usually means something like 'tottering', 'unsteady', 'precarious' - the sense of which might best be approximated by 'shaky' in our idiom (i.e. movement <u>without</u> shifting of things, which gives an instability; in the appropriate contexts 'dicey') - and the passage would then read:

> ....the shaky use of the word 'object' corresponds to the shaky use of the words 'property' and 'relation'....

And the context supports 'shaky' in the sense of 'dicey'; for the use of these words is 'shaky' ('dicey') because these words are 'pseudo-concepts' - things about which we can really say nothing (see 4.122 + 4.1272). The context in which this passage occurs is a discussion of internal properties and relations. And, in a closely preceding passage, Wittgenstein has said that 'it is impossible, however, to assert by means of propositions that such internal properties and relations exist...' (4.122), and he is just about to introduce the idea of a 'formal concept' ('in the same sense that we speak of formal properties' - 4.126) and hold that 'objects' is such a concept. (4.1272). That is, our parenthesis occurs within a context of a discussion of formal discourse and is serving to introduce the idea that the notion of 'object' is formal in the same way that we have explained (internal 'property' and 'relation' to be, and that as the two latter - in virtue of being formal - cannot be asserted to exist, so we cannot make assertions about objects either. So construed, this passage <u>in no way</u> implies that the use of 'object' is deviant here; quite the contrary - it indicates the use to be an exemplary one. And, hence, it in no way implies that shades of color - or other attributables analogous to these logically - are not

objects; again, quite the contrary.

The second argument is connected with passage 6.3751:

> 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: more or less as follows - a particle cannot have two velocities at the same time; that is to say, it cannot be in two places at the same time; that is to say, particles that are in different places at the same time cannot be identical.
>
> (It is clear that the logical product of two elementary propositions can neither be a tautology nor a contradiction. The statement that a point in the visual field has two different colours at the same time is a contradiction.)

The passage clearly rules out propositions mentioning colors as elementary and, hence, colors as objects - since 'it is only in the nexus of elementary propositions' that objects are mentioned (4.23), and colors are here shown to be mentioned in the nexus of non-elementary propositions. It is assumed that colors are ruled out as objects because of their type - because they are attributables, and it is argued on this basis that Wittgenstein would rule out as objects all attributables.

The passage, however, does not support this assumption - and neither does anything else in the Tractatus. We are given no reason to assume that colors are ruled out as objects because of their type; there is at least as much ground to assume that colors are not objects because, as they stand, they are complex, and could be analyzed into simple attributables, which would be objects. And this latter hypothesis seems to be the more plausible one in the light of Wittgenstein's subsequent article, 'Some Remarks on Logical Form' (Aristotelian Society Supplementary Volume, IX, 1929, pp.162-17

where he seems to suggest that colors are not objects because they can be analyzed into degrees of color, which would be objects.[6] Degrees of color are still attributables; thus he evidently would allow objects of this type.

These arguments, then, do not provide difficulties for my view of objects. Indeed, much of the evidence which they invoke can be turned against the position for which they argue - and, ipso facto, in favor of my own view, that objects are categorially simple 'attributables'.

This characterization of objects requires one qualification, namely, that the objects are categorial simples, attributables, which are simple; the underlined clause adds something in those cases in which simplicity of category does not yet yield complete simplicity - in which it is necessary, but not sufficient, for simplicity. We might have such a case with a spatial position; this is a categorial simple, but, if it consisted of a number of spatial points, we might yet regard it as a complex, and analyzable into the respective points - which points would then qualify as the completely simple objects. From the evidence in 'Some Remarks on Logical Form', another such case might be that of color, or the brightness of a color, which, while, categorially simple, might yet be analyzed into degrees.

It might be said of my view of objects, that it is that they are universals rather than particulars. This is true in the sense that, ordinarily, particulars are just physical things, while universals are attributables. It is also true with respect to the role-distinction which the particular-universal distinction connotes, if we say of this distinction, a la Strawson, that particulars can be singled out and named, but they cannot be attributed, or predicated, while universals can be both singled out and

named, and attributed, or predicated. For, in the context of configuration with other objects - which is the only context in which we will have objects - objects will be both nameable and attributable; that is, in being attributable, they will also be nameable.[7] The only difference between objects and ordinary attributes is that the objects will normally fill both roles at once, since a proposition describing the configuration will both name all the objects, and ipso facto, attribute each to the other as configuration partners.

Since objects are not ordinary physical things, the idea of the configuration of objects will depart from the paradigm of configuration. It is, however, difficult to say anything more positive in a general way about what these configurations of objects will be like, because they will vary according to the category of object in the configuration. This is not to say that just anything will now count as a configuration, but only that as we move away from the paradigm, the idea of configuration becomes at once more complicated, and more hazy. As a general rule, I suppose it could be said that the configurations of objects will be uniform as to category of object - unless other factors allow a relation of elements of differing categories in a configurable way - and will be configured in ways appropriate to the category or categories involved. Just what these extenuating factors are, which permit crossing of categories in a configuration, and just what sort of configuration is appropriate to a given category, may both be matters settled ad hoc and on appeal, in the final analysis, to what seems to make sense. Thus, with regard to category crossing, we might prohibit the configuration of the color of a particular lamp with the weight of the table upon which the lamp sits as surely unintelligible, while we might permit the

configuration of the color of the lamp with the shape of the lamp. With regard to the respective natures of the configurations, I am reluctant to hazard an example where an example is really needed - i.e. where we have no established vocabulary for describing configured relations, such as 'above' and 'below' for configurations of spatial positions - but I suppose that if, e.g. it is maintained that a physical thing is a configuration of its various attributes (or, rather, of the various objects which compose its various attributes), then we are thrown back on saying that these are configured as we perceive them - whatever this may mean.

Be this as it may, we are now ready to consider how these configurations of objects make up the world.

2. The World and Configurations

The initial question to ask here is whether the world 'consists' of the configurations in such a way that the world is just one big configuration of objects - so that any given configuration is just a fragment of the world-configuration. The Tractatus does not provide decisive evidence to answer this question, but it is never said that the world is just a configuration of objects, and, moreover, considerable pains seem to be taken - in the introduction of the terminology of 'fact' and 'state of affairs' - to avoid saying this. That is, Wittgenstein says of the world, not that it is a configuration of objects, but that it consists of facts (1.1), and that facts consist of (the existences of) states of affairs (2) - these states of affairs being the configurations of objects. All this seems to indicate that the world is not just a configuration of objects. And, in the light

of the foregoing discussion of configuration, the reason for this is not hard to discover. For, it was suggested that not every object can be configured with every other - that some configurations are ruled out of court. Thus, if the world consists of objects, some of which are mutually unconfigurable, then it will not be just one large configuration.

Given this position, the question is now, at what level do configurations combine to form non-configurations - when facts come together to form the world, or when states of affairs come together to form facts - and what is this combination like? Again, the Tractatus - together with related documents - does not provide a decisive answer, but the evidence suggests that it is between states of affairs and facts that the transition from configuration to non-configuration occurs. States of affairs are, by definition, configurations. In Wittgenstein's letter to Russell from Cassino (19.8.19), the implication is that facts are not:

> "What is the difference between Tatsache and Sachverhalt?" Sachverhalt is, what corresponds to an Elementarsatz if it is true. Tatsache is what corresponds to the logical product of elementary props (sic) when this product is true. The reason why I introduce Tatsache before introducing Sachverhalt would want a long explanation. (Notebooks, p. 129; 'Tatsache' = 'fact', 'Sachverhalt' = 'state of affairs'.)

As I will discuss in part III of this chapter, logical connectives, e.g. the 'and' in logical products, do not stand for anything at all in the world (see infra, p.62, and note 43; also, see 4.0312, 5.4 - 5.441, 5.4611). Therefore, if it makes any sense at all to talk about something corresponding to a logical product, then a fact is just some group of configurations - and there is nothing about a logical product to suggest that this group is a configuration itself.

While the fact is not a configuration, the combination of states of affairs into facts seems to involve a putting together of the states of affairs in a definite way, for,

> 2.034 The structure of a fact consists of the structures of states of affairs.

That is, a fact, while not a configuration, will have a definite structure composed of configurations. A fact may therefore be something like a lamp standing on a desk - this will involve configurations of colors, shapes, weights, etc. which do not exactly form one configuration, but which do combine to form a definite situation, just the lamp standing on the desk. To mark this, I will say that the fact is a 'twofold' structure: it is one kind of structure, a non-configuration, of another kind of structure, configurations. Given that a fact does involve a definite structure of the configurations, it will not be quite right to say, as Wittgenstein seems to, that a fact is <u>just</u> a logical product of these configurations. For a logical product does not include or stipulate a definite structure among the group of states of affairs which correspond to it - a fact is therefore <u>more</u> than what corresponds to a logical product. Wittgenstein may not have meant to deny this in his letter from Cassino; he needn't have, for it is no contradiction to say that a fact is a logical product of states of affairs, <u>and</u> that it is a twofold structure - these are two <u>aspects</u> of facts. In any case, I will point out when I turn to a consideration of picturing that Wittgenstein makes use of the idea that a fact has a definite structure, is a <u>twofold</u> structure.

If facts, like the world, consist of, but are not, configurations of objects, we may assume that facts and the world are of exactly the same type'

differing only as do parts and whole. Thus,

1.2 The world divides into facts.

In the same way as facts, the world consists of the existence of states of affairs:

2.04 The totality of existing states of affairs is the world;

and, while a twofold structure, the world can be regarded as the logical product of the component states of affairs. Wittgenstein also says that the world is not only the existence but also the non-existence of states of affairs:

> 2.06(1) The existence and non-existence of states of affairs is reality.
>
> 2.063 The sum-total of reality is the world.

The reason appears to be that

> 2.05 The totality of existing states of affairs also determines which states of affairs do not exist.

If we have the totality of existing states of affairs, then we also have the totality of those which do not exist, so that if the world is the former then it is also the former plus the latter.[8] This view at least suggests that the possible - or the possibilities of - states of affairs form a fixed set out of which any totality of existing states of affairs will be drawn. This set might be likened to a bag of marbles from which any marbles to be taken out of the bag will come, the marbles outside the bag at any time being the existing states of affairs constituting the actual world. I will substantiate, and elaborate upon, this when I move to consider, below, the possibilities of the world.[9] What concerns us here, however, is that the actual world is a definite structure of existing states of affairs, configurations of objects, without itself being what one could call a configuration

of objects; it is a twofold structure of objects.

To say a bit more about the states of affairs, the configurations of of objects which form the building blocks of the world: - Wittgenstein insists, in the first place, that these are <u>determinate</u> structures:

> 2.02 In a state of affairs objects fit into one another like the links of a chain.
>
> 2.031 In a state of affairs objects stand in a determinate relation to one another.

Secondly, these states of affairs are logically independent of each other:

> 2.061 States of affairs are independent of one another.
>
> 2.062 From the existence or non-existence of one state of affairs it is impossible to infer the existence or non-existence of another.

It might be thought that the fact that the totality of existing states of affairs also determines which do not exist (2.04) jeopardizes this logical independence, particularly in the light of 2.062. I do not think it does, however, because we do not infer the non-existence of one state of affairs from the existence of another, but only from the <u>totality</u> of existences, and it is the fact that this is a totality which is the determinative factor.[10] Wittgenstein also says of facts that they are logically independent of each other (see 1.21 in context); insofar as the facts are those gotten by a particular division of the world - and this is the context of the claim - this appears to be alright, for logical products imply one another only when, contrary to context, they are identical, or when the product implied is contained in the product implying. This does not mean that facts and states of affairs are always independent of one another, for, of course, the existence of a fact will imply the existence of the states

of affairs of which the fact consists. Finally, states of affairs are contrasted with objects, in that

> 2.0271 Objects are what is unalterable and subsistent; their configuration is what is changing and unstable.

States of affairs, configurations, are unstable in virtue of the fact that they are composites of parts which can come together and also can fall apart, disintegrating the complex. Objects, which are absolutely simple, are not prone to this change or disintegration. This, if nothing else, gives objects the status of substance:

> 2.021 Objects make up the substance of the world. That is why they cannot be composite.

Wittgenstein marks this contrast by saying that the objects are what 'subsist', while the states of affairs are what can 'exist', or not exist.[11] We are now ready to turn to a consideration of the possibilities of the world

B. The Possibilities of the World

The matter of the possibilities of the world is a matter of form, and matters of form, in the Tractatus, are ultimately a matter of the form of objects. An object, while simple, nevertheless has a form, i.e.

> 2.0141 The possibility of its occurring in states of affairs is the form of an object.

The possibility of its occurring in states of affairs, configurations, is the form of an object in both a general and a particular sense. In general, it is the form of any object that it can be configured in states of affairs; it has this possibility. Wittgenstein gives a logical reason for this, viz.

> 2.0121(4,5) Just as we are quite unable to imagine spatial objects outside space or temporal objects outside time, so too there is no object that we can imagine excluded from the possibility of combining with others.

> If I can imagine objects combined in states of affairs, I cannot imagine them excluded from the possibility of such combinations.

That is, objects are all configurable in states of affairs, because we cannot conceive of objects which are not so configurable.[12] It will turn out, in part II, that all that we can think (or say) about particular objects is that they are configured with given sets of other objects; thus the logical point here is something like saying that we cannot imagine a thing which we cannot think (or say) anything about.

In particular, a given object will have a particular form in that it will be able to enter a given set of configurations; the form of any individual object will be the possibility of entering the configurations which it itself can enter. This aspect of the form of objects is suggested, e.g. by:

> 2.012 In logic nothing is accidental: if a thing can occur in a state of affairs, the possibility of the state of affairs must be written into the thing itself. (See also 2.0121(1,2), 2.0123.)

Wittgenstein calls the form of a given object, its configuration possibilities the 'internal properties' of the object (2.0123 + 2.01231), in contrast to its 'external properties', which are, presumably, the configurations which actually enters - or, perhaps, the remainders of the configurations with which it combines (since an object will, of course, for a part of a configuration which it enters). And if we know an object, we must know its internal but not necessarily its external, properties (although, of course, in knowing its internal properties, we will know all its possible external properties).

It is practically the premise of the distinction between facts and states

of affairs that not any object can be configured with any other,[13] and this may in itself entail that objects have respectively differing particular forms.[14] However, there is good evidence that the Tractatus position is that the forms do differ:

> 2.0233 If two objects have the same logical form, the only distinction between them, apart from their external properties, is that they are different.
>
> 2.02331(1) Either a thing has properties that nothing else has, in which case we can immediately use a description to distinguish it from others and refer to it; or, on the other hand, there are several things that have the whole set of their properties in common, in which case it is quite impossible to indicate one of them.

The implication is clearly that some objects will have the same form in common, while some objects will differ from each other as to form, which is to say that not all objects will have the same form. Further evidence for this is

> 2.0251 Space, time and colour (being coloured) are forms of objects.

Now, since the internal properties of an object are its possibilities of combination in states of affairs, if we have the internal properties of an object, then we will also have the possible states of affairs which it can enter; that is to say, the form of an object determines possibilities of states of affairs (see, e.g. 2.012). Moreover, these possibilities of states of affairs might be regarded as the forms of states of affairs, just as the possibilities of objects combining are the forms of objects. In a more general statement about form, Wittgenstein does say that 'form is the possibility of structure' (2.022), and 'structure' in this case clearly refers to the structure of states of affairs (see 2.032). And it is clear that the forms of objects and the forms of states of affairs come to exactly

the same thing, viz. the possibilities of configurations, of states of affairs. If they differ at all, it is just a difference of emphasis: the former are combination-possibilities of objects, while the latter are the possibilities of combinations of objects. This difference of emphasis means only that in the case of objects, we consider all the combination-possibilities - possibilities of states of affairs - which constitute the form of a given object. In the case of states of affairs, we just consider one possibility of a state of affairs, which constitutes the form of the given state of affairs.

In view of the all-pervasiveness of this notion of the possibility of a state of affairs, it would be useful here to clarify it by considering the distinction between it, as a possibility, and a possible state of affairs. A state of affairs is a possible existing configuration of objects. The class of possible states of affairs includes the class of actual states of affairs, since, of course, what is actual is also possible. Now the class of possibilities of states of affairs does not intersect with either of the preceding two. A possibility of a state of affairs might best be described as the idea of the configuration of objects, which idea neither exists nor does not exist, but is instantiated in the configuration of objects, in the state of affairs - possible or actual. That is to say, the form of a state of affairs is the idea of the state of affairs, and is of a category entirely different than that of the state of affairs. Of course, a good deal more could be said on this matter - and it will receive some elaboration in part II of this chapter.

Having translated the idea of the form of objects into the idea of form

of states of affairs, we can now translate it into the idea of the form or possibility of the world. The possibilities of states of affairs constitute the possibilities of the world, as well as the possibilities of facts, in two senses - not very well distinguished in the Tractatus - which correspond roughly to the two ways of regarding a fact - as just a logical product of states of affairs, and as a determinate structure of the states of affairs, a twofold structure. With regard to the former, insofar as a fact is just a logical product of states of affairs, the form of the fact could be considered to be just the logical product of the forms of the states of affairs of which the fact consists. Likewise, the forms of the states of affairs of which the fact consists, could be considered to constitute the form of the world - or, more precisely, since the world consists not only of the existence of states of affairs, but also the non-existence of all those other states of affairs which were possible, the form of any world could be considered to be constituted of all of the forms of the states of affairs. This can be elaborated.

It will be recalled that objects are substance, are subsistent, so that the totality of them is, in a certain sense, given - they cannot pass into and out of existence. So too, then will the totality of the forms of the objects be given, and so, too, will the totality of the forms of the states of affairs. Now, which members of the totality of the forms of the states of affairs are instantiated in existence will be - at any given time - the actual existing world. Further, any possible world will consist of the instantiation of some number of forms taken from the totality of forms, and the non-instantiation of the others, that is to say, the existence of some

of the possible states of affairs and the non-existence of the others. This is the marbles-in-the-bag account which was mentioned above (supra p.16) And thus this totality of forms will be something which every possible world will have in common. And this is, I think, Wittgenstein's idea of the form of the world which is given in:

> 2.022 It is obvious that an imagined world, however different it may be from the real one, must have something - a form - in common with it.

Any possible world must have in common with any other the same stock of possibilities of states of affairs, and this is its form. And, insofar as the possibilities of states of affairs are determined by the objects, so ipso facto, is the form of the world. The sequents of 2.022 are,

> 2.023 Objects are just what constitute this unalterable form.

> 2.0231 The substance of the world can only determine a form, and not any material properties. For it is only by means of propositions that material properties are represented - only by configuration of objects that they are produced.

It can be noted here that the tone of 2.022 - 2.0231 suggests that Wittgenstein is giving, inter alia, an argument that there necessarily are objects, taking off from the premise that the world does have this form. Before moving to consider the second sense of 'form of the world', it is wort a brief digression here to examine this argument to objects.

An Argument to Objects.

Wittgenstein takes as a premise that any world has this form - a fixed stock of possibilities of states of affairs. Now, as the premise stands, it would give a circular argument, for states of affairs involve there being objects, by definition. This can be adjusted, however, for the real point

of the premise is that there is a fixity of the stock of possibilities of configurations - of some configurations - never mind whether these are configurations of absolute simples.

The premise could therefore be put,

1. For some elements E, there is a fixed stock of the forms of the configurations of E, call these the FCE.

The argument can then be put informally as a series of further steps:

2. Suppose that this fixed stock of FCE numbers m. Then for some number of m of FCE there must be some number n of actual E.

3. Now it can be assumed that if the E are not simple objects, then they are themselves configurations of simpler elements, E', and that the totality of the forms of the configurations of E', the totality of FCE', is larger than the number n of the existing E - say there are (n + y) FCE'. And if the number of possibilities of E is greater than that of the E, then the number of FCE increases as well: for, given that there are FCE' as well as the E - the result of the E being configurations, rather than simples - then the FCE are really the FC(FCE'). That is, the possibilities of the configurations of the E are limited by the possibilities of the E, rather than the given actual E, where there is a distinction between these two. Thus, for (n + y) FCE', there are (m + x) FCE.

4. Now, if there are no objects, then there will be an infinite regress of the E - in order of increasing simplicity: E, E', E'', E''', ... - and there will be infinite additions to the stock of the FCE -

because there will be infinite additions to the FCE', the FCE'', the FCE''',..... Thus there will be (n + y + y' + y'' + y''' + ...) FCE', and (m + x + x' + x'' + x''' + ...) FCE. Moreover, these sums will yield infinite numbers: the stock of the FCE will be infinite.

5. If there are infinite FCE - the result of there being no objects - then contrary to premise, there will not be a fixed stock of the FCE. An infinite stock is not a fixed stock.

6. Therefore, there must be objects.

This argument involves at least two difficulties, however, In the first place, step 5 may not work. The trouble is that it does not seem to follow from the fact that a set is infinite, that it is not a fixed set,[16] or it may follow only on the basis of a particular mathematical position, which, in any case, is not provided in the Tractatus. In the second place, the premise, step 1, is dubious - it is just not clear that any real world (and Wittgenstein purports to be talking about real worlds) must have such a fixed stock of possibilities. He justifies the premise by saying that any world must have some form in common with any other, but having such a fixed stock of possibilities is not the only way all possible worlds might have something in common. In the real world, and in the worlds described by the Tractatus itself, if we are given a set of things they will have a definite, and limited, set of combination-possibilities; not that for any world there is a fixed stock of possibilities, but for a given set of things there is such a fixed set. This is sufficient to give a form which will be shared

by any possible world, but this does not necessitate objects. Thus, this argument for the necessity of objects, really does not work. I will devote a good deal of chapter 2 to considering two other such arguments present - implicitly or explicitly - in the Tractatus.

To return to the consideration of the form of the world, the second sense in which the possibilities of states of affairs constitute the form of the world, or of a fact, is this: a given world, like the facts into which it divides, consists of a definite structure of configurations; it is a twofold structure. The possibility - form - of this structure consists of the possibilities of the component configurations, but it also consists of the possibility of the structure of the configurations; it will be called a 'twofold' form. This sense of 'form of the world', twofold form, might better be called 'form of a world', for it differs from form in the other sense in that it is not something held in common by all possible worlds, a stock of possibilities of states of affair, but is the form of a particular world. While it has, in this sense, less scope twofold form involves more, for it is not only the possibility of the structures of the component states of affairs, but it involves as well the possibility of the structure of these structures. It does no violence, I think, to say that the form of a world, or of a fact, is at once twofold form and the logical product of the forms of states of affairs, and that these are really two aspects of one thing.

To conclude this section on Wittgenstein's ontology, it can be said that the world, any possible world, is a twofold structure of configurations of objects - although it can be considered as the logical product of these

configurations. And the form of the given world is the possibility of its twofold structure, a twofold form, although it can be considered as the logical product of the forms of the component states of affairs. In this latter case, the form of the world becomes the fixed stock of possibilities of states of affairs which all possible worlds will have in common.

II. Picturing.

I will discuss here the workings of the propositions which are pictures, the picture-propositions. Now, prima facie there are great differences between pictures and propositions. To begin with, they do not even seem to be of the same category. Propositions are not material things, and cannot be identified with the material things - signs and speech-acts - which are used to express them. Pictures, while they may not be material things merely, are much more identifiable with material things than are propositions To make any sense at all of the picture theory, this difference is going to have to be ignored, because it is not a difference which Wittgenstein recognizes; he seems to dissolve it by drawing propositions close to the category of material things, e.g.,

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

Beside this, however, differences remain, which can be best expressed by saying that pictures do not say anything, but they do reflect, to some extent and thus show the structure of that which they picture. Propositions, on the other hand, do say things, but, prima facie, couched as they are in signs or speech-acts, they do not reflect the structure of anything, do not show anything. Now, these differences must be resolved, for pictures are to be

the paradigm of saying with a picture-propositional expression, and it is to be possible for notational expressions to be picture-propositions. Thus, the consideration of the picture-propositions really involves two basic questions, viz.

(1) how is picturing - which reflects structure and thus shows something - to be conceived as saying, and

(2) how can a notational expression be conceived as a picture; that is, how can a picture-proposition be notationally expressed.

I shall devote the major portion of this discussion of picturing to answering these two questions, allotting a separate section to each.[17] For the remainder, I will add as a third, and final, section a discussion of two matters which characterize the picture-propositions, viz. a general form, and a logic.

Before embarking on these considerations, however, the general point should be made that the whole of the discussion of picturing is given in terms of facts, for,

2.1 We picture facts to ourselves. (my underlining)

We can speculate that the reason for this is a conceptual one, which underscores the difference between facts and states of affairs. It is that anything which we can picture (in the ordinary sense), conceive of, or imagin will be a fact - a twofold structure - rather than a simple configuration. For, while categorial simples are the components of configurations, we cannot conceive of categorial simples in isolation, but must conceive of them as part of a fact, made up of categorially complex things. Thus, we might be interested in the spatial configuration of two spatial objects qua spatial.

So considered the objects would be categorially simple elements of a simple spatial configuration. But objects cannot be conceived of that way - just qua spatial objects, for we cannot conceive of spatial things without some color, some density, some tactile qualities, some temporal duration, and so on. Thus we must conceive of a fact, consisting of various configurations appropriate to the various types of categorial-simples involved. Of course, among these configurations will be inter alia, a spatial configuration simpliciter - and, in our conception, we can emphasize this aspect of the fact if we are interested in it. But we cannot consider the spatial configuration as isolated from the twofold structure of the fact - we picture facts.[18]

A. Picturing as Saying.

The general question here is, how does a picture work to say something? And the general answer is that a picture shows something, and in showing something, it says something. I will consider in detail,

1. what it is in a picture that achieves a showing which is a saying, what is what one might call the 'mechanism of picturing',

2. what it is that is shown, and

3. what it is that is said.

1. The Mechanism of Picturing

The kernel of the account of pictures is contained in the sequence of passages:

> 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 the objects.
>
> 2.14 What constitutes a picture is that its elements are related to one another in a determinate way.
>
> 2.15(1) 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.

According to these passages there are essentially two components of a picture first, a fact having a determinate structure - what I will call a 'picture-sign', and, second, correlations between the respective elements of the picture-sign and the fact pictured.[19] With regard to the latter, it is important to point out that Wittgenstein's pictures include correlations between the elements of the picture and the objects in the fact being pictured, thus differing from what are ordinarily called 'pictures'. This receives much elaboration:

> 2.1511 That is how a picture is attached to reality; it reaches right out to it.
>
> 2.15121 Only the end-points of the graduating lines actually touch the object to be measured. (Cf. 2.1512)
>
> 2.1513 So a picture conceived in this way also includes the pictorial relationship which makes it into a picture.
>
> 2.1514 The pictorial relationship consists of the correlations of the picture's elements with things.
>
> 2.1515 These correlations are, as it were, the feelers of the picture's elements with which the picture touches reality.

Thus a picture is not simply a fact - the fact is only the picture-sign component of the picture.[20]

More can be said about the picture-sign component, too, for it is to be

stressed that it is a fact rather than a state of affairs, and that consequently Wittgenstein shies away from saying that its determinate structure is a configuration, preferring to say that it is a 'determinate relation' (2.14, 2.15, 2.151). There are two reasons for this: the first is quite simply that any sign which we can produce will be a fact, rather than a simple configuration. This for the same reason that we cannot conceive of a simple configuration taken by itself. The second has to do with the fact that in a picture the structure of the sign reflects that of the fact pictured, and this structure-reflection appears to play a role in the mechanism of picturing. This structure-reflection in the sign is something over and above the structure-reflection provided by the picture as a whole. We see this with respect to color-structure, in colored pictures of colored things, with respect to spatial structure, in spatial models of spatial things (Wittgenstein would include such models among pictures - see 2.12, and also, infra. pp. 36-37), and so on. Thus, since we picture facts, our picture-sign will be a fact - have the twofold structure of a fact. It must be stressed that this aspect of the picture-sign, that it reflects structure, is something over and above just the providing of a determinate structure as such. And this aspect of the picture-sign is never given explicit acknowledgement, for the picture-sign is introduced in the Tractatus merely to provide an element of structure - never mind what it reflects - although reference to it may be found buried in the account of what is shown (see infra. pp. 36-37). Nevertheless, it will be seen that it is made use of, implicitly, in accounting for the way in which the components of a picture serve as a mechanism of picturing, although its role is not finally significant.

Now the way in which these components combine as a mechanism to show something, appears to be quite straightforward. Suppose that we wish to show a particular spatial thing A lying to the left of a particular spatial thing B. Then we can draw a spatial object lying to the left of another spatial object, thus making a picture-sign, and correlate the one drawn object with A, and the other drawn object with B, and then the structure of the picture-sign - drawn A drawn to the left of drawn B - will <u>show</u> the correlated A and B having the same structure - A to the left of B. Note that the picture does not show <u>that</u> A <u>is</u> to the left of B; it is not this sort of showing; it shows the A to the left of the B, but does not assert anything in this connection. (This is a hypothetical example, insofar as - for the reasons given on pages 28 - 29 - the categorially complex spatial objects would not be the elements of a fact.) The way in which the correlations operate is clear enough, but let us look a bit more closely at the role of the structure of the picture-sign. We have seen that the picture-sign has two aspects - just a structure <u>per se</u>, and also a structure providing structure-reflection. To consider each of these separately, the aspect of structure <u>per se</u>, given that we have the correlations, does show the A and the B related to one another in <u>some</u> definite way - but it does not help to specify which way. It is here that the structure-reflection aspect comes in, for if the picture-sign is not merely a structure <u>per se</u>, but a structure of a spatial thing to the left of another spatial thing, then this provides the necessary specification of the structure which allows the picture to show A to the left of B.

There is, however, something further which must be done by the picturing

mechanism to give us a picture - and if it is not done by the mechanism as it stands, then we must add a third component to it. For, if the picture is to show the A lying to the left of the B, then it must be understandable as showing this - i.e. it must be readable, interpretable. Or, better put, it could be said that a picture-sign with correlations does not show something is not a picture unless it is understandable as showing this something - for if it is impossible that what we call a picture shows what it shows to or for some one, then it could hardly be said to show, to be a picture at all. This is given implicit recognition by Wittgenstein, for it is not that pictures picture facts, but rather, with pictures,

2.1 We picture facts to ourselves. (my underlining)

This does not introduce anything psychological into pictures, except in the sense that if the picture is understandable, then it is possible that it will be understood by someone. It is rather the point that a picture must have a certain epistemological character - and that Wittgenstein's pictures must therefore meet the demands of this character; his pictures must be understandable; they therefore must provide the basis, grounds, for their own understanding or interpretation. Now, what must be understood is what is shown, and this has two aspects, provided respectively by the two components of pictures already introduced. Do the components provide for the understanding of what they contribute to what is shown? If it is stipulated that correlations are made or given each time a picture is used, then these do provide their own interpretation, for giving the correlations is as much as to say what is correlated with what. And it might be thought that the structure-reflection aspect of the sign provides for the understanding of the

structural part of what is shown. But this would be illusory, for the sign, at any rate, is a material thing and a material thing in itself never provides the understanding of it in its role as a part of a representational system; a material thing does not interpret itself. This is certainly obvious where the structure of the sign does not exactly reproduce the structure of the fact pictured, e.g. where we represent spatial things by two-dimensional means - here there is not only the physical thing serving as the picture-sign, but also there are the conventions governing this representation. And when I take up notational expressions as pictures, I will show how even in the case of exact and complete structure-reflection in the sign, conventions are needed to provide the correct understanding (see infra. note 30). Thus I will say that a third component is needed, viz. conventions or usage which is somehow established, and which provides the basis for the understanding of what is shown. This third component receives no explicit mention at all in the discussion of pictures, and this may be because Wittgenstein thought mistakenly that structure-reflection in the picture-sign does do the job of these conventions. In the discussion of propositions in notation, where there is no such structure-reflection, he does recognize the need for this third component; I will say more about this third component when I consider this discussion.

Given that there is this third component, conventions, what has been said about the other two can be modified. Concerning correlations, there is now no need for them to be given with every use of a picture - correlations, inter alia, can be established by these conventions. Concerning the picture-sign, the aspect of structure-reflection is entirely superfluous. Given the appropriate conventions, anything can serve as the sign for a given fact,

and the conventions will thus take over the role of specifying what sort of structure we have. To have the first two components as they are required by the picturing mechanism, we need only have a sign providing determinate structure, and our conventions. We thus have showing, and Wittgenstein makes the move from saying that a picture shows something, e.g. the A lying to the left of the B, to saying that in showing this, the picture says that there obtains in the world a situation corresponding to what is shown in the picture, e.g. that the A is to the left of the B.

> 2.15(1) 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. (my underlining)

This move from 'showing' to 'saying that' is given no particular justification in the Tractatus. Nevertheless, we might speculate that in appropriate contexts, the structuring of things correlated with objects in the world might be taken to say that the correlated objects were so structured in the world, and we might speculate of the Tractatus Wittgenstein, that he took this sort of context to be the standard one.

A picture, therefore, consists of three components: the correlations, the picture-sign - which is a fact -, and the conventions for understanding the picture-sign, all of which combine to form a mechanism of picturing. The picturing shows something, and in showing something, says something. I now move to a consideration of what is shown, and, then, what is said - and in the course of this I will develop a distinction between the two.

2. What is shown.

To identify and elucidate what it is that is shown in a picture, I will

first give a discussion of Wittgenstein's notion of pictorial form, and then I will suggest that it is this which is shown in a picture. Wittgenstein introduces pictorial form as something which is held in common between picture and fact pictured:

> 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.
>
> 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.,

and which is at once the possibility of the picture:

> 2.15(2) 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.,

and the possibility of the fact pictured:

> 2.151 Pictorial form is the possibility that things are related to one another in the same way as the elements of the picture.[22] (See also 2.203.)

As the possibility of the fact pictured, the pictorial form is something which we have encountered before - the twofold form of a twofold structure, which structure when it exists forms a part of the structure of the world. The question remaining is how the possibility of the fact can also be the possibility of the picture picturing the fact. Before dealing with this question, however, we must consider a complication.

The complication is that Wittgenstein talks about pictures in connection with at least two kinds of form, what I will call 'material form', and logica

form - and, prima facie, it is not clear which of these is the picture's pictorial form, as I have described it. Material forms are the forms of qualities or attributes of material or physical things, e.g. color, space, time. And material forms are associated with pictures insofar as, at least in the 2's, Wittgenstein is interested in pictures whose picture-signs have all the material forms of the fact being pictured:

> 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.

This reproduction of the material forms in the picture-sign is at least part of what I have identified above (p.31) as the structure-reflection aspect of a picture-sign.[23] Now, is this material form the pictorial form? We do know that the pictorial form is something which the picture must have in order to be a picture of its corresponding fact (2.161, 2.17). In the picture the material form contributes to the structure-reflection aspect of the picture-sign. We have seen that this aspect of the picture-sign is superfluous to the mechanism of picturing (supra. pp.34-35), indeed, it will be seen in the discussion of propositions as pictures, part B, that this aspect must be superfluous to picturing, if propositions in notation are to be regarded as pictures. Thus the material form is not something which a picture must have, and thus it is not the pictorial form.

This leaves logical form,[24] and the Tractatus discussion of logical form gives ample evidence that it is intended to be the pictorial 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.)

2.19 Logical pictures can depict the world.

2.2 A picture has a logico-pictorial form in common with what it depicts.

Now in 2.181, Wittgenstein equates pictorial form with logical form in those pictures which are logical pictures. And in 2.182, Wittgenstein says that all pictures are logical pictures. Thus, in all pictures, pictorial form is the same as logical form. (Again, it is said that logical form is what a picture must have in common with reality (2.18), while no such necessity is indicated in 2.171 for material form.) It is therefore the logical form which, as pictorial form, is at once the possibility of the fact pictured and the possibility of the picture. We have now to consider how it can be the latter while being the former.

The form of the fact pictured is the form of the picture in a weaker and in a stronger sense. The weaker sense is just this: if the fact is an impossibility then a fortiori a picture of this fact is an impossibility. And, since Wittgenstein seems to assume that whatever is possible can be pictured, if the fact is possible, then the picture of the fact is possible. Hence, the possibility of the fact is ipso facto the possibility of the picture of the fact, and the realm of what can be said and what is possible is therefore co-extensive, both being determined by the form of the world, the possibilities of facts. The stronger sense results from the need of the picture - if not the picture-sign - to reflect the structure of the fact

pictured. In picture and pictured fact we therefore have two isomorphic, if distinct, structures, and this would be the 'work' of a single form common to them both. The only trouble with this stronger sense is that in the Tractatus no account is given of how one possibility is the source of isomorphism in two distinct structures - as form is presented, there is just one structure per possibility. Nevertheless, there is at least a place for such an account, made by the discussion of pictorial form, and the provision of such an account would not involve insuperable difficulties. Not surprisingly, the two senses in which the form of the fact is the form of the picture provide an explanation of why the fact and the picture must have this form in common. They must have this form in common both because the picture and the fact must be possible or impossible together, and because of the demands of structure-reflection.

It must now be argued that this pictorial form is what is shown in a picture. To make clear what we are arguing for, it must be stressed that it is not merely that the pictorial form is shown, but that it is what is shown in the operation of the mechanism of picturing, that - in being shown - it fills a particular role. This role is one contrasted with that of what is said:

> 4.121 Propositions cannot represent logical form: it is mirrored in them.
>
> What finds its reflection in language, language cannot represent.
>
> What expresses itself in language, we cannot express by means of language.
>
> Propositions show the logical form of reality.
>
> They display it.

4.1212 What <u>can</u> be shown, <u>cannot</u> be said. (See also 4.12).

But the role of what is shown is nevertheless very closely tied to that saying:

4.022 A proposition <u>shows</u> its sense.

A proposition <u>shows</u> how things stand <u>if</u> it is true. And it <u>says that</u> they do so stand.

What is shown as it were identifies and characterizes what it is we say obtains in the world. (It 'identifies' insofar as the form is the form of a particular fact, consisting of particular objects; this particular form is shown since the picturing mechanism includes correlations.)

Now, it is easy enough to get Wittgenstein to say that pictorial form is shown - <u>inter alia</u>, we find this in 4.121. For it is <u>as</u> pictures that propositions are being discussed in this passage. They show the 'logical form of reality', and this is pictorial form - cf. the above discussion, and also 2.18. Hence, pictures show their pictorial form. But, of course, this while necessary is not yet sufficient to demonstrate - as required - that pictorial form, as something shown, fills the particular role with which we are concerned. And for this there is, unfortunately, no neat textual evidence. Nevertheless, as the possibility of the fact which the picture asserts to exist, the pictorial form <u>does</u> identify and characterise what is said to exist by the picture, and with this contention I will rest my case that the pictorial form is what is shown, in the required sense. What is shown, then, is the form of the fact pictured, produced by the operation of the mechanism of picturing.

3. What is said.

In connection with the discussion of what is shown, something has already been indicated about what is said by a picture. What is said amounts to the assertion of the existence of something the nature and identity of which is specified by the form shown in the picture - the form, then, acting like the idea or concept of that which is asserted to exist.[25] (It is for this reason that I suggested that form as possibility of a fact - the form in question here - might best be described as the idea of that fact; see supra. p.21. To go into any more detail about what is said, however, involves us in a difficulty.

The difficulty results from the tension between picturing and saying, introduced into the Tractatus by the position that picturing - what a picture does - is saying. It is the mark of a fairly firm distinction between picturing and saying that these verbs take objects ('objects' in the grammatical sense) of quite different categories. What we picture are material or physical entities, e.g. structures or Wittgensteinian facts. What we say are linguistic or logical entities, generally characterized by beginning with a 'that the...'; thus we say that the cat is on the mat. Normally, we do not picture 'that the cat is on the mat', and we do not say structures. Given that picturing is saying, however, what is said can be either a structure or a 'that the...' This can be seen in Wittgenstein's own diction. Generally speaking, in the Tractatus, the terms 'picturing', representing', 'depicting' are all synonymous, and amount to 'saying'[26] And Wittgenstein says both that

2.1 We picture facts to ourselves.,

and that

> 2.15(1) 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. (my underlining in both cases.)

And, given that picturing is the same as saying, a structure will be the same as a 'that the...', and both are what is said. The difficulty is just that the two are not equivalent, and that, moreover, in the case in which what is said is a structure, a fact, the idea of what is said is unintelligible.

Given that it is to be insisted that picturing is saying, the only way out of this difficulty is to do a bit of violence to the category distinction between a structure and a 'that the...', and to say that the former really is the latter. Insofar as we are to make sense of the picture theory, we must regard Wittgenstein as taking this way out wherever he has to - e.g., by implication, in the passages 2.1 and 2.15 just quoted - although this immediately lands him into category difficulties. Another place where we see this way out taken is

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

(We may see this also where Wittgenstein talks about the sign for the fact pictured, in 2.14 and again in 3.14.)

It would be a mistake, I think, to take too seriously this category violence when considering Wittgenstein's ontological views, for it smacks of a desperation measure used primarily in connection with the discussion of picturing, and its analogues - e.g. 'perceiving'. And in the Notebooks,

at any rate, he indicates that he is well aware of the category distinction in question - although he suggests that the distinction is troublesome:

> The theory of the complex is expressed in such a proposition as: "If a proposition is true then Something exists"; there seems to be a difference between the fact expressed by the proposition: a stands in the relation R to b, and the complex: a in the relation R to b, which is just what "exists" if that proposition is true. It seems as if we could designate this Something, and what's more with a real "complex sign" - the feelings expressed in these sentences are quite natural and unartificial, so there must be some truth at the bottom of them. But what truth?..... (15.5.15).

Be this as it may, we can affirm that what is said by a picture is of the form of a 'that the...'; the picture says that something exists in the world as identified and specified by what is shown in the picture.

A final point about what is said: it must be either true or false, which is to say that the picture, as a proposition, must be truth-determinable.

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

Wittgenstein's picture of truth is straightforward enough, c.f. the following

> 2.221 What a picture represents is its sense.
>
> 2.222 The agreement or disagreement of its sense with reality constitutes its truth or falsity.

That is to say, a proposition says that things stand in the world in a certain way - indicated by what it shows - and this is its sense; if things do stand in the indicated way then the proposition is true; otherwise it is false.[28]

B Notational Expressions as Pictures.

Asking how a notational expression can be a picture amounts to asking for the identification of the three components of the picturing-mechanism, viz. correlation, determinate structure, and conventions governing the understanding of the structure. If we can indicate how these three components are found in a notational expression, then we will have indicated how a notational expression can be, in the significant sense, a picture: in having the picturing-mechanism it will show something, and in showing something it will say something. Therefore, I will consider Wittgenstein's answer to this question by examining what in a notational expression he identifies as each of the three required components of the picture. (In the following, for the sake of simplicity, I will refer to the notational expressions as 'propositions', although, of course, this does not indicate that the non-notationally expressed pictures are not propositions as well.)

As the correlation between the elements of the picture and the respective elements of the fact pictured, Wittgenstein identifies naming, which makes the elements of the proposition - as picture - into names.

> 3.2 In a proposition a thought can be expressed in such a way that elements of the propositional sign correspond to the objects of the thought.
>
> 3.201 I will call such elements 'simple signs', and such a proposition 'completely analysed'.
>
> 3.202 The simple signs employed in propositions are called names.
>
> 3.203 A name means an object. The object is its meaning. ('A' is the same sign as 'A'.)
>
> 3.22 In a proposition a name is the representative of an object.

The names are called 'simple signs', and - as indicated by the parenthesis of 3.203 - these signs are considered in the sense of 'types', rather than 'tokens'.

For the determinate structure we have in a proposition, instead of the picture-sign, the propositional-sign:

> 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. (See also 3.141, 3.142).

Determinate structure is essentially involved in any printed notation, or, indeed, in whatever we use as notation:

> 3.143 Although a propositional sign is a fact, this is obscured by the usual form of expression in writing or print.
>
> For in a printed proposition, for example, no essential difference is apparent between a propositional sign and a word.
> .....
>
> 3.1431 The essence of a propositional sign is very clearly seen if we imagine one composed of spatial objects (such as tables, chairs, and books) instead of written signs.
>
> Then the spatial arrangement of these things will express the sense of the proposition.

And in saying something with an ordinary proposition - just as in a picture - the structure provided by the sign is expressive, is part of the mechanism of picturing. Thus,

> 3.1432 Instead of, 'The complex sign "aRb" says that a stands to b in the relation R', we ought to put, '<u>That</u> "a" stands to "b" in a certain relation says <u>that</u> aRb.'

We come, finally, to the third component, that of conventions for the

understanding of what is shown by the sign. As in the context of the discussion of picturing, the need for, and, hence, the role of, conventions is indicated by admission that the proposition must be understood, or, as Wittgenstein puts it here, 'projected':

> 3.11 We use the perceptible sign of a proposition (spoken or written, etc.) as a projection of a possible situation.
>
> The method of projection is to think the sense of the proposition.
>
> 3.12 I call the sign with which we express a thought a propositional sign - And a proposition is a propositional sign in its projective relation to the world.

And, unlike the discussion of picturing, Wittgenstein here actually gives - if grudgingly - explicit provision for the role of conventions.[30] But to see what these conventions are, we must consider his idea of symbols.

1. Symbols

It will be recalled that a picture can be considered as just the picture-sign plus the conventions, for, given that we have these, then we have the two other components of correlation and significant structure (see supra pp.34-35) In the symbol, we have the proposition so regarded - i.e., just as the sign plus the conventions, and this amounts to a sign with an established use.

> 3.32 A sign is what can be perceived of a symbol.
>
> 3.326 In order to recognise a symbol by its sign we must observe how it is used with a sense.

Wittgenstein introduces the notion of symbol (or 'expression' - these are synonyms) with,

> 3.31 I call any part of a proposition that characterizes its sense an expression (or a symbol).
>
> (A proposition is itself an expression.)
>
> Everything essential to their sense that propositions can have in common with one another is an expression.
>
> An expression is the mark of a form and a content.[31]

'Symbol' seems to refer to any thing within the whole of language which could be regarded as consisting of a sign plus conventions establishing its use.[32] (And it should be clear that my own use of 'expression' throughout this thesis coincides with what Wittgenstein means by this term (or 'symbol')). Thus, not only are particular propositions symbols (3.31(2)), but also such things as, on the one hand, signs or aspects of signs having a more general use - standing for classes of propositions or words[33] - and, on the other, sub-propositional parts of language - words and phrases.[34] I will, however, consider only propositional symbols here.

Now, what establishes the signs as symbols, giving them a definite use? The answer seems to be rules, or 'rules of syntax'. For 'syntax' seems to govern the use of the signs in language; e.g., with reference to the confusions caused by homonyms, it is said:

> 3.325(1) In order to avoid such errors we must make use of a sign-language that excludes them (i.e. homonyms) by not using the same sign for different symbols and by not using in a superficially similar way signs that have different modes of signification: that is to say, sign-language that is governed by a <u>logical</u> grammar - by logical syntax. (My parenthesis. See also 3.323 and 3.324.)

The implication of the passage is that all language is governed by syntax, although not all syntax is 'logical' syntax. We are not told what syntax

in general is, but presumably it differs from 'logical' syntax not in the way it works, but rather in the way it organizes language; i.e. not in the way in which it establishes usages, governs language, but in the usages which it establishes. And, 'logical' syntax seems to govern language by consisting of rules:

> 3.334 The rules of logical syntax must go without saying, once we know how each individual sign signifies.

It is the rules - presumably both in logical and non-logical syntax - which establishes the notation, and we may conclude that these rules are the conventions which form the third components of propositions, and - most likely - pictures as well, necessary for the mechanism of picturing. It is on the basis of rules that we understand the picture-sign or propositional sign as a picture.[35]

Since rules establish the use of signs, any sign can be given any use, so that signs can be chosen quite arbitrarily and have rules applied to them. Wittgenstein thus regards any given language as consisting of signs which, in principle, are arbitrary (see 3.322, 3.323, 3.326, 3.327, 3.328.). Of course, once the signs have been given definite uses with the aid of rules, then as symbols they acquire characteristics which are quite non-arbitrary. For, the uses to which the signs can be put - both collectively and individually - will be determined by the form of the world which the symbols will express. (See <u>supra</u> . p.38). Taken as a whole, the symbolism cannot be used to express facts which are not possible, and symbols individually cannot be combined with each other in ways corresponding to formal impossibilities. Thus,

> 3.342 Although there is something arbitrary in our notation, this much is not arbitrary - that <u>when</u> we have determined one thing arbitrarily, something else is necessarily the case. (This derives from the <u>essence</u> of notation.)

While the introduction of rules does explain how the symbolism is established, and does indicate the nature of the third component in the picturing mechanism, the explanation in effect stops with the assertion that there are these rules, and that they do govern the use of the signs. We are told nothing about how the rules work, except that they 'must go without saying' (3.334), which only serves to deepen the mystery of how these rules are conceived as operating in picturing. It may be felt that the explanation of these rules ends much too early, but nothing more can be said about them within the realm of critical exposition.

Thus, propositions, notational expressions, can be pictures, picture-propositions. And these notational expressions which have the notational version of the components of the picturing-mechanism, i.e. propositions whose elements are solely names, whose signs have determinate structures which are expressive, and whose understanding will be governed by conventions, rules, of use, will <u>ipso facto</u> be picture propositions. (This is not to say that propositions which are not picture-propositionally expressed might not share at least some of these three characteristics). The class of picture-propositions will thus consist of the classes of pictures notationally expressed and those non-notationally expressed. Indeed, there may not be a distinction between the latter two classes at all - depending on whether we can construe the idea of notation broadly enough to include that which provides some structure-reflection of the fact pictured. For, if the two classes differ at all, then they differ only in that in non-notational

pictures the sign has the aspect of structure-reflection - partial or complete - while in notational pictures the sign does not have this. However, given the third component, this difference is trivial, for the structure-reflection in the sign is entirely superfluous to the mechanism of picturing. And, given this third component, both notational and non-notational expressions - as picture-propositions - can be reduced to sign plus conventions; the conventions being rules for the use of the sign, making the sign into a symbol.

APPENDIX: Thought

It is worth pointing out here that the sense of a picture-proposition is equivalent to a thought, and noting some of the consequences of this. We can surmise that thought is equivalent to sense, what is said by a proposition, because Wittgenstein speaks alternatively of sense and thought being expressed in a proposition, without indicating that he is using 'express' in two different ways, e.g.,

> 3.1 In a proposition a thought finds an expression that can be perceived by the senses. (See also 3.12 and 3.2.)
>
> 4.002(1) Man possesses the ability to construct languages capable of expressing every sense, without any idea of how each word has meaning or what its meaning is - .....

If thought is equivalent to sense, then, what is thought will be equivalent to what is pictured, or said, <u>viz</u>. that a given fact exists. (This is not to say that thinking is equivalent to picturing, for, they diffe at least insofar as thinking does not involve a sign, whereas picturing does. And we may expect that the realm of what can be thought coincides with the

realm of what can be said or pictured. This receives many expressions in the Tractatus, not the least of which is the position that we must be able to think, project, or understand, what we picture. Among the other expressions are:

> 3.001 'A state of affairs is thinkable': what this means is that we can picture it to ourselves.
>
> 5.61(4) We cannot think what we cannot think: so what we cannot think we cannot say either. (See also 4.114 - 4.116, in which parallel constructions obviously indicate equivalence between what can be thought and what can be said.)

We might speculate that it is because of this equivalence between what can be thought - what is intelligible - and what can be said, that Wittgenstein calls what can be said 'logical', e.g. when he calls all pictures 'logical pictures'. It is remarkable that it is in connection with the discussion of the equivalence of thought and sense - between 3. and 3.1, primarily - that the more or less explicit identification of what can be said with what is logical occurs, i.e.,

> 3.03. It used to be said that God could create anything except what would be contrary to the laws of logic. - The reason being that we could not say what an 'illogical' world would look like.
>
> 3.032 It is as impossible to represent in language anything that 'contradicts logic' as it is in geometry to represent by its co-ordinates a figure that contradicts the laws of space, or to give the co-ordinates of a point that does not exist.

Like what is said, the realm of what is thought - what is intelligible - is determined by the form of the world, that is, by the totality of possibilities of facts. (See supra. p.38.) Whatever can be thought must have, as its 'content', the possibility of some fact - this is another instance

in which the description of the form of a fact as an 'idea' fits well (see supra. p.21.). Thus,

> 3.02 A thought contains the possibility of the situation of which it is the thought. What is thinkable is possible too.

What is intelligible, then, like what is sayable, is the same as what is possible - they all share, and are determined by, the same possibilities. Wittgenstein never does say whether the possibilities which determine both what can be thought and what there can be are more closely allied to the one side or to the other, and probably his position does not permit such a decision. The possibilities, forms, are just 'ideas', equally independent of thought and of reality.

C. The General Form and Logic of Picture-Propositions

It would be appropriate to conclude the consideration of picture-propositions by giving a brief account of each of two items which characteriz in general this sort of proposition. I will discuss first the general form, and, second, the logic of picture-propositions.

1. The General Form of Picture-Propositions

The general form of picture-propositions is presented in 4.5, as 'This is how things stand.' While this general form is here expressed by means of what we would ordinarily call a proposition, we may assume that the form is not in fact something said, for forms are not said, but shown. Indeed, no particular proposition says that 'this is how things stand', but always provides specification of the 'how things stand' which it asserts to obtain

in the world. Rather, the 'this is how things stand' is shown in everything that is said by picture-propositions - everything that is said has to do with the assertion of a particular standing of things. Although it is not something said, the general form is nothing more or less than an expression of what propositions in general say, viz. the assertion of the existence of some structure of objects - some fact the nature and identity of which is specified by the form (i.e. the particular form) shown in the picture. Thus Wittgenstein says,

> 5.471 The general propositional form is the essence of a proposition.

And the essence of a proposition is the essence of description, of what a proposition says:

> 5.4711 To give the essence of a proposition means to give the essence of all description, and thus the essence of the world.
>
> 4.023B) A proposition is a description of a state of affairs.

We may say, then, that this general form is expressed - although not said - in every particular proposition (see note 33).

2. The Logic of Picture-Propositions

Wittgenstein uses the term 'logic' often enough in connection with picture-propositions to make it worth considering whether there is a logic of picture-propositions, and of what this logic might consist.

Generally, logic in the Tractatus is characterized by three attributes. First, it is identified as a question of forms,

6.1224 It also becomes clear now why logic was called the theory of forms and of inference.

Second, it is incorporated in notation, or language:

6.1223 Now it becomes clear why people have often felt as if it were for us to 'postulate' the 'truths of logic'. The reason is that we can postulate them in so far as we can postulate an adequate notation. (See also 5.6 and 5.61; 6.124.)

Third, it is, of course, an a priori matter:

5.551 Our fundamental principle is that whenever a question can be decided by logic at all it must be possible to decide it without more ado.

(And if we get in a position where we have to look at the world for an answer to such a problem, that shows that we are on a completely wrong track.)

5.552 The 'experience' that we need in order to understand logic is not that something or other is the state of things, but that something is: that, however, is not an experience.

Logic is prior to every experience - that something is so.

It is prior to the question 'How?', not prior to the question 'What?'. (See also 6.125 and 6.1222.)

If there is in fact a logic of picture propositions, then, in terms of the first two attributes, we can identify the logic as a logic of what can be said. What can be said, the formulation of all possible propositions, is a matter of logic insofar as it is determined by form and is, obviously, incorporated in the notation, the language. This will be a logic if knowledge of what can be said is an a priori matter - has the third attribute of logic - as well.

Since what can be said is determined by the forms, an argument that the knowledge of the former is a priori is an argument that forms can be known a priori. An argument that forms can, and indeed must, be known a priori can easily be given. It can be assumed that picturing a fact required knowledge of the form of that fact. If the form of this fact were not known a priori then it would have to be learned by seeing it manifested in the actually existing fact. Thus, in order to picture a fact, we would have to see the actually existing fact. Since the picture of this fact would assert the existence of it, it would follow that we could only have true pictures, or true propositions. This is clearly contrary to the Tractatus (see, e.g. 2.21; also note 27): a picture or proposition must be capable of being either true or false; we cannot have only the possibilit of true propositions. Therefore, in the Tractatus, the forms must be known a priori and we can determine what can be said a priori as well.[37]

In the light of the foregoing argument, Wittgenstein's rather lengthy denial that the determination of the elementary propositions is a priori is puzzling (see 5.55 - 5.5571.). For, while elementary propositions are not pictures (see supra. pp. 28-29), they are practically immediately derivable from pictures, so that if pictures are in any way a priori then so are elementary propositions. There are indications, however, that Wittgenstein is not denying the a priority of the aspect of propositions with which I am concerned, e.g.,

> 5.55 We now have to answer a priori the question about all possible forms of elementary propositions.
>
> Elementary propositions consist of names. Since however, we are unable to give the number of names with different meanings,

> we are also unable to give the composition of elementary propositions.

One way to read this is just as a general denial that we can offhand give or establish, actually produce, all the different name-symbols. This is true very straightforwardly, as it is also true that if we are given the names, we cannot at once formulate all the possible propositions, but must think about what combinations of names are intelligible and what combinations of names are not. But while we might certainly grant that elementary propositions are not given, actually formulated, a priori we could still maintain that the possibilities, what can be said, are knowable a priori. Recognition of this may be indicated by:

> 5.557 The application of logic decides what elementary propositions there are.
>
> What belongs to its application, logic cannot anticipate.
> It is clear that logic must not clash with its application.
> But logic has to be in contact with its application.
> Therefore logic and its application must not overlap.

If this 'application of logic' is the deciding of what propositions are possible - what can be said - by considering the propositions as we formulate them, and rejecting them as senseless or accepting them as legitimate on the basis of a priori considerations of intelligibility, then the aspect of propositions with which we are concerned would still be a priori.

The determination of what can be said is a matter of logic, then, the logic of picture-propositions. This logic consists of the doing of somethin - viz. the consideration of propositions as we formulate them - rather than of a body of propositions or assertions themselves. Indeed, it is most probable that the content of this logic is something which cannot be said at

all. For, if we were to express what the logic tells, it would be in the form: 'such-and-such is an allowable proposition', and it is fairly clear that we cannot say anything about propositions at all (See 5.5351). That such-and-such is an allowable proposition - the content of our logic - is shown by our successfully formulating the proposition; the logic consists of things shown rather than said.

III. Truth-functions.

To complete my account of picture-propositions, I will provide a brief and general discussion of truth-functions. I shall divide this discussion into two: in the first part I will give an account of the nature of truth-functions, in so far as it forms a portion of the nature of picture-propositions. Picture propositions are, inter alia, truth-functions; they are so in that all propositions are truth-functions (5).

In the second part I will consider the way in which truth-functional expression provides the means of expression in terms of picture-language, but which are not themselves picture-propositions. In an appendix to this I will note Wittgenstein's suggestion that all propositions can be translated into picture-propositional language.

A. Picture-propositions as Truth-functions.

It is easy enough to show that picture-propositions are truth-functions. For, it has been explained that facts are what correspond to logical products of elementary propositions (when this logical product is true) - if also, with twofold structure, a bit more than this. Therefore, the pictures of

these facts are logical products of elementary propositions - if also, since they must reflect twofold structure, a bit more than this. And as a logical product, the picture-proposition can be expressed as an indication that it is true when all the elementary propositions of which it is a product are true, and false otherwise.[38] And, having the possibility of this expression, the picture-proposition is a truth-function.

More generally, a truth-function is a proposition which can be expressed as the set of its truth-conditions in terms of the truth-possibilities of elementary propositions (see 4.4, 4.41, and 4.431). Such an expression is something like the schema (call it 'schema A'),

p	q	r
T	T	T
F	T	F
T	F	F
F	F	F,

where the 'p' and 'q' stand for elementary propositions, and 'r' for the proposition being expressed as a truth-function. The four rows of truth-values under 'p' and 'q' are the four truth-possibilities of the given elementary propositions (see 4.3), and the column of truth-values under 'r' is given correlation with these truth-possibilities to indicate that 'r' is true when 'p' and 'q' are both true, and is false for the other three cases - that is, to indicate the truth-conditions of 'r' in terms of the truth-possibilities of the elementary propositions 'p' and 'q'.[39] And the schema is thus the expression of proposition 'r' as a truth-function.[40]

This expression indicates that the proposition 'r' has certain truth-relations to the specified set of elementary propositions, and it can be

said that a proposition is a truth-function - is capable of being given truth-functional expression - in virtue of its having such truth-relations. The having of these truth-relations might be called the 'truth-functional aspect' of a proposition, and insofar as all propositions are truth-functions our interest in the nature of truth-functions is really an interest in the nature of this truth-functional aspect of all propositions.

The truth-relations themselves might be regarded as the truth-functional form of the proposition. Wittgenstein is not very helpful here, but these truth-relations can be regarded as form on the assumption that there is a certain analogy between the workings of a truth-functional expression and those of the pictorial expression of a proposition. Like a picture, the truth-functional expression - e.g. the schema given on the preceding page - shows something, here the truth-relations of 'r'.[41] And in showing this, again on analogy with a picture, the schema says 'r'.[42] If the analogy is carried out, then what is shown, the truth-relations, is the form of the truth-functional expression - 'form' in the sense of 'possibility' - and it is a form which the proposition shares with reality. This form will be instantiated in reality not in the structures of states of affairs and facts, but in the relations that the existences of states of affairs have to the existences of facts - or, more generally, situations - which the former compose.(cf. 2.11) - e.g. in the existence of the states of affairs designated by 'p' and 'q' when the correspondent of 'r' exists.

Wittgenstein illustrates all that is connected with the truth-functional aspect of a proposition by means of the notion of 'logical space' (see 3.42, 4.0641, 4.463, and 5.513, inter alia, for his development of this notion).

To get at this notion, suppose that we have two elementary propositions, 'p' and 'q', which, taken jointly, will have four truth-possibilities (for n elementary propositions, the propositions taken together will have 2^n truth-possibilities - see 4.27), as in schema A. Now, each of these truth-possibilities can be regarded as a point in a space - if we do not worry too much about the number of dimensions, and the continuity, in this space. And this space would be a logical space - a space consisting of a point for each truth-possibility of the set of elementary propositions being considered a space of four points in this case. These points can be taken with each other in various ways, forming sets, and if it is added that these sets are the sets of truth-possibilities <u>for which a truth-function is true</u>, then these sets become logical <u>places</u> in logical space. If we count the absence of points and the totality of points, as well as the points taken singly, as sets, then there will be sixteen such logical places in the present logical space (or 2^{2^n} for n elementary propositions - see 4.42).

In these terms, we can regard the truth-functional aspect of a proposition as its determination of a logical place, in a logical space. The logical place will be designated by the truth-relations of the proposition to the set of elementary propositions. The expression of the proposition as a truth-function will show this place, in showing the truth-relations, and say something like 'This is the place'; for each logical place there will be a truth-function with such an expression. In reality, the logical place is 'filled' when the correspondent of the truth-function exists. It is 'filled' by the obtaining of one of the truth-possibilities which compose the given logical place.

In virtue of its designation of a logical place, the truth-functional form of a proposition will have a relation to the other forms which designate the other logical places in logical space. That is to say, the logical places in a logical space will all have relations to each other. And the truth-functional forms, as well as the propositions in which they are contained will have relations to each other in virtue of these relations of their logical places. These relations of the logical forms compose a logic not the logic of picturing discussed above, but a truth-functional logic in which a proposition participates in virtue of its truth-functional aspect. The detailing of the nature of this logic requires a brief detour through a discussion of operations.

Operations embody the provision of truth-relations or truth-functional forms. The operation is not itself the truth-relations, or form, but can be regarded, alternatively, as the way in which these relations are established (see 5.23, 5.233, 5.234), or as marking the difference between the forms of the propositions which are truth-related (see 5.22, 5.24, 5.241). The operation can be regarded as operating on the given elementary propositions by associating truth-values with their truth-possibilities and so producting a further proposition truth-functionally expressed. For example, in schema A, we can see an operation producing 'r' out of 'p' and 'q' by associating the truth of 'r' with the joint truth of 'p' and 'q', and the falsity of 'r' with all the other truth-possibilities of 'p' and 'q'. Or, alternatively, the operation can be regarded as the difference between the truth-functional forms of the elementary propositions with which we start ('An elementary proposition is a truth-function of itself.' - 5), and the

truth-function whose truth-conditions are given in terms of the truth-possibilities of these elementary propositions. Thus, for example, we can see an operation as the difference between 'r', on the one hand, and 'p' and 'q' on the other. Operations can also operate upon the truth-possibilities of propositions which themselves have been produced by operations - that is, they can operate upon truth-possibilities which are truth-possibilities only in relation to the truth-possibilities of elementary propositions (see 5.251 ff., and 5.31).

The operation can be incorporated into the notation for truth-functions; we can express the truth-function as a construction formed by the operating of the operation upon the elementary propositions. As a part of the truth-functional symbol, the operation serves to characterize the proposition by indicating how it is produced from other propositions, or how it stands to these other propositions.[43] For example, we can express 'r' as 'p.q', where the '.' stands for the operation of logical multiplication. This notation for a truth-function is established by simply correlating it with the expression of the truth-function as a schema of its truth-conditions (see 5.101). Both the schematic and the operational expression of the propositio are distinctively truth-functional expressions of the proposition.[44]

The number of operations which we regard as distinct and fundamental is fluid and arbitrary. For, for each truth-function we can distinguish a unique operation which expresses the relation of its form to those of elementary propositions to which it has truth-relations. But the applicatio of any such operation can also be regarded as the applications of other operations, thus reducing the first operation to the others, and eliminating

it as a fundamental operation. This reduction of operations can be reflected in our operational notation. For example, let us lay out an operational notation for the sixteen truth-functions relative to 'p' and 'q', by taking the schema for them (call it 'schema B'), viz.

p	q	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	s
T	T	T	T	T	T	T	T	T	T	F	F	F	F	F	F	F	F
F	T	T	T	T	T	F	F	F	F	T	T	T	T	F	F	F	F
T	F	T	T	F	F	T	T	F	F	T	T	F	F	T	T	F	F
F	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F,

and expressing 'a' as '1(p,q)', 'b' as '2(p,q)', 'c' as '3(p,q)',..., and 's' as'16(p,q)'. The numbers indicate the sixteen respective operations which we can distinguish, and each operation operates upon the truth-possibilities of the propositions in the brackets - e.g., '1' yields the truth of the truth-function for every truth-possibility of 'p' and 'q'. Now, suppose that we apply operation 2 to '4(p,q)' and '5(p,q)' (i.e. to 'd' and 'e'): we have then '2(4(p,q), 5(p,q))', and this is the same as '1(p,q)'. This means that we do not have to distinguish operation 1 at all, for we can regard it as equivalent to 2,4. and 5 combined in a certain way, and this means that the symbol '1' can be dispensed with. In the usual notation for truth-functions we see all operations reduced to combinations of five operations, viz. negation ('-'), logical addition ('v'), logical multiplication '(.'), logical equation ('='), and material implication (')') (see 5.101). Wittgenstein demonstrates that it is possible to reduce all operations to one,[45] and suggests a notation appropriate to this.[46]

The truth-functional logic, then, consists of the relations between the logical places or forms of truth-functions, these r elations being indicated by the operations needed to produce the form on one side of the relation

from that (or those) on the other. It is a matter of truth-functional logic that we produce the truth-function which we do, by the application of given operations in a given way to other given propositions; and we have this production in virtue of the relation between the form of the proposition produced and the form(s) of the proposition(s) from which the proposition is produced. Thus, with reference to schema B, it is a matter of logic that we produce '1(p,q)' by the application of operation 2 to '4(p,q)' and '5(p,q)' - and we get the former by the application of 2 to the latter in virtue of the relation between their respective forms. Indeed, it is a matter of logic that the application of a given operation to the initial elementary propositions produces an initial truth-function - e.g. the establishment of the truth-function formed by relating the truth-values of the truth-function to the truth-possibilities of elementary propositions is a matter of logic too.

This logic meets the three criteria of a logic, which have already been mentioned (see supra. pp. 53-54). It is embodied in a truth-functional notation - either schematic or operational. It is concerned with forms - truth-functional forms here. And the knowledge of the relation between these truth-functional forms is a priori - it is not something learned from experience. It is a mark of the a priority of our knowledge of these matters of logic that the indications of the relations between truth-functional forms can be expressed as tautologies - tautologies being propositions, which, truth-functionally expressed, have the truth-relations 'true for every truth-possibility of the relevant elementary propositions.' For example, the fact that the application of operation 2 to '4(p,q)' and '5(p,q)' produces '1(p,q)', can be expressed as the operation of logical

equivalence upon '1(p,q)' and '2(4(p,q), 5(p,q))', which produces the tautology 7(1(p,q), 2(4(p,q), 5(p,q))) ('7' stands for the operation of logical equivalence, with reference to schema B).

Tautologies then are the propositions of this logic, which express all that truth-functional logic has to tell us about propositions.

6.1 The propositions of logic are tautologies.

But, while this logic can be expressed in these propositions, since these propositions are tautologies, this logic is not really something said, because tautologies really do not <u>say</u> anything.

6.11 Therefore the propositions of logic say nothing. (They are the analytic propositions.)

Thus, like the logic of picture-propositions, what we know as a matter of truth-functional logic - what we know about the relations between the truth-functional forms - is something <u>shown</u> rather than said.

6.12 The fact that the propositions of logic are tautologies <u>shows</u> the formal - logical - properties of language and the world.

The fact that a tautology is yielded by <u>this particular way</u> of connecting its constituents characterizes the logic of its constituents.

If propositions are to yield a tautology when they are connected in a certain way, they must have certain structural properties. So their yielding a tautology when connected <u>in this way</u> shows that they possess these structural properties.

The logic of truth-functions is shown, I suppose, by the way in which we operate upon them, as the logic of picture-propositions is shown by the picture-propositions which we formulate.

While truth-functional logic has much in common with that of picture-propositions, it should be obvious that the two are quite distinct, and that while a given picture-proposition may involve both of them - insofar as it has both a pictorial and a truth-functional form - it will involve them as two distinct logics, dealing with two distinct sorts of form. Wittgenstein is not as clear as he might be in keeping these two logics distinct, because whenever he talks about logic it is in the singular, with no indication that he is talking now about one sort of logic and now about another. But it would be difficult to pin him down to a reduction of one logic to the other, because whenever he talks about logic it is in terms which would apply equally well to both logics. This is even the case where he speaks of logic as consisting of tautologies, for, it might be maintained that the notion of 'tautology' applies equally well to what we know as a matter of the logic of picture-propositions.

In virtue of their being truth-functions, then, we can say of picture-propositions that they have truth-relations to a given set of elementary propositions, that is, truth-functional forms. A truth-functional form will designate a logical place for the proposition, and in designating this logical place the form will have relations to the forms of other truth-functions, relations which can be known as a matter of truth-functional logic In virtue of having a truth-functional aspect, then, picture-propositions will participate in the logic of truth-functions as well as that of picture-propositions.

In a general discussion of truth-functions, this is all that can be said about picture-propositions with respect to their truth-functional dimension.

But this is not quite all that can be said about the picture-propositions, for there is something yet to be told about the special position which picture-propositions have amongst the truth-functions, and this merits mentio at the close of the account of the picture-propositions.

B. Truth-Functional Expression and Picture-Propositional Language.

Not all truth-functions are picture-propositions (only logical products can be picture-propositions), but those which are not, nevertheless can be shown to be expressed in terms of picture-propositions. For, in the first place, all truth-functional expressions involve specification of elementary propositions - in the specification of truth-relations to them. Second, it appears that elementary propositions cannot be specified except by the formulation of picture-propositions. For, elementary propositions reflect configurations of objects. And we cannot reflect configurations of objects except insofar as we reflect them incorporated into the twofold structure of a fact; we can only express an elementary proposition by expressing a picture-proposition (see <u>supra</u>. pp. 28-29 , and note 18). And, finally, we can speculate that, if we can only formulate elementary propositions by formulating a picture-proposition, and if formulating a truth-function involves formulating elementary propositions, then - while a truth-function may not be a picture - its formulation will incorporate the expression of picture-propositions. Thus, all propositions truth-functionally expressed are part of picture-propositional language.

If truth-functional expressions are thus part of picture-propositional language, they, together with the picture-propositions themselves, also appear

to exhaust this language - expression in terms of picture-propositions. The mention here of truth-functional expressions thus completes my discussion of picture-propositional expressions thus completes my discussion of picture-propositional language. Before closing this chapter, however, I will cite the indication of Wittgenstein's position that all propositions not picture-propositionally expressed can be translated into picture-propositional language.

Appendix: Non-Picture-Propositional Expressions and the Picture-Propositional Language

The picture-propositional language might be said to be characterized *inter alia* by expression in terms of objects; it is only in picture-propositional expressions that names occur. For,

> 4.23 It is only in the nexus of an elementary proposition that a name occurs in a proposition.,

and elementary propositions only occur in connection with picture-propositional expressions. Thus an indication that any proposition can be expressed in terms of objects is an indication that any proposition can be translated into picture-propositional language. And we see then such an indication in the passages 3.2 - 3.22, already quoted (see *supra*. p.44), in which it is stated that a (and presumably this means 'any') proposition can be analyzed to names of objects. This means that we can always have translation of a proposition into picture-propositional language.

If such translation is always a possibility, then this raises the question what role does this translation have in ordinary discourse? - can it in fact

be carried out?, and if so, then when do we have this translation? This is as much as to ask: what is the linguistic role of picture-propositional language with respect to ordinary discourse? And it is to the answering of this question that I now turn.

Chapter 2: The Linguistic Role of Picture-Propositional Language

We have here to consider the linguistic role of picture-propositional language with respect to ordinary discourse - an enterprise which will involve, inter alia, determining whether picture-propositional expressions are used in ordinary discourse. Since picture-propositional language consists primarily of names of - or correlations with - objects, (the other component being truth-functional operation signs in truth-functional expressions), and since the names of objects occur only in picture-propositional language (see 4.23), the linguistic role of picture-propositional language may be determined by considering the linguistic role of names of objects. And the linguistic role of these names may be determined by considering the main argument, to be found in both the Tractatus and the Notebooks, on behalf of the existence (or 'subsistence') of objects, for this argument proceeds from a view of the nature of ordinary discourse, and turns on the linguistic role of names in ordinary discourse so-viewed. I shall therefore consider the linguistic role of picture-propositional language by considering this argument to objects, giving in separate sections,

1. an account of the argument to objects, and
2. the account of the linguistic role of picture-propositional language which follows from this argument.

I. The Argument to Objects

I shall divide the discussion of this argument into four parts; the first part will contain the exposition. Here my task is twofold, for I must lay out Wittgenstein's view of language, and draw out from this view the

argument to objects. Even if we were not interested in the Wittgensteinian view of language, the first task would have to be performed, for the argument is embedded firmly in the view of language - it is never laid out on its own. To facilitate the extraction of the argument, I will proceed by giving the account of Wittgenstein's linguistic views in the form of a series of premise In order to draw out the argument, I will, as I proceed with the premises, introduce the necessary steps of the argument as corollaries to the respectiv premises from which they follow. Then, I will take these corollaries and with them put together the argument.

It will turn out that this argument involves difficulties of an epistemological nature, and in the second part of this account I will consider these. In the third part I will discuss the way in which Wittgenstein gets out of these difficulties - only at the cost of vitiating his argument. I will conclude, in the fourth part, by taking up what might be regarded as an alternative argument - given in 2.02. - 2.02.2 of the Tractatus - with which Wittgenstein attempts to replace the main argument, deriving the existence of objects from the requirements of language, while staying out of the epistemological difficulties of the original argument.

I should add at the outset that the bulk of the views which I will consider are to be found in both the Tractatus and the Notebooks, and I will support my ascription of these positions to Wittgenstein by parallel quotations from the respective texts wherever this serves to clarify his views. In those few cases in which we find a position represented in the one text but not the other, I will take due note, and will attempt to give some account of the respective presence and absence of the position.

A. Exposition

1. Premise 1 (two parts):

a. The propositions in ordinary discourse have sense, are usable.

b. The propositions in discourse must be either true or false; that is to say, they must be truth-determinable.

That the propositions in ordinary discourse have sense, and are usable, just as they are, is something which Wittgenstein would have to grant, were he to have any hope of giving an accurate account of discourse, even if this were not necessary for his argument. Be that as it may, it is necessary, and it is a position he holds, e.g., in the Tractatus:

> 5.5563(1) In fact, all the propositions of our everyday language, just as they stand, are in perfect logical order.....,

and in the Notebooks, e.g., with:

> .....But this is surely clear: the propositions which are the only ones humanity uses will have a sense just as they are and do not wait upon a future analysis in order to acquire a sense..... (17.6.15. See also 9.5.15.).

That the propositions in discourse must be truth-determinable is a position which permeates the Tractatus, and is crystallized in such passages as:

> 4.023(1) A proposition must restrict reality to two alternatives: yes or no.
>
> 4.023(3) A proposition is a description of a state of affairs.
>
> 4.024(1) To understand a proposition means to know what is the case if it is true.

This means at least that any proposition in discourse must have a sense which

is sufficiently fixed or determinate to allow a truth-determination to be made. Thus, if a proposition such as 'The stone is speckled' is to be truth-determinable - as it must be, if it is to be a proposition - then the sense and reference of 'the stone' must be fixed, as must the sense of 'speckled'. I call such fixity of sense 'determinate sense', and a proposition's having determinate sense is logically equivalent to its being truth-determinable. Thus the corollary to premise 1 could be added:

> 1c. The propositions in ordinary discourse have <u>determinate</u> sense, are truth-determinable.

I will use this corollary as a step in the argument, in the form:

> Where P = a given proposition in ordinary discourse, (P has determinate sense).

2. Premise 2:

> The definition of a word is given by the expression of the extensional analysis of that for which the word stands.

By 'extensional analysis', I mean simply analysis from whole to component part, and the expression of this analysis will indicate the component parts of the whole, as well as indicate the way these components stand to each other in the whole. I will call this sort of definition 'extensional definition'.

The idea that a definition will indicate the components of what it stands for is certainly given with the passages:

> 3.26 A name cannot be dissected any further by means of a definition: it is a primitive sign.
>
> 3.261 Every sign that has a definition signifies <u>via</u> the signs that serve to define it; and the definitions point the way.

> Two signs cannot signify in the same manner if one is primitive and the other defined by means of primitive signs. Names cannot be anatomized by means of definitions. (This cannot be done to any sign that has a meaning independently and on its own.)

And by 'component part' can be understood, I think, anything which in any way might be regarded as a component of a thing. This is a broader understanding that the usual or paradigm - the paradigm being that a component part of something is a spatio-physical entity which forms a part of a larger spatio-physical entity - which might include, inter alia, the attributes of a thing. This broader understanding is justified in that the world, or facts, in breaking down into smaller components, objects, divides not only into smaller physical things, but also into attributes. Indeed, if this process of analysis in definition is carried out to completion, the components which result will be objects, and these are more of the nature of attributes than spatio-physical things (see chapter 1, section I, A, 1).

The idea that this definition includes an indication of how the components stand to each other in the whole does not have such a clear-cut textual source. Nevertheless, there is evidence, at least in those cases in which the definition expresses complete analysis - thus indicating the component objects of the thing stood for - , that the definition is expressed as a picture of the complex thing being defined. And a picture not only indicates the component objects, but also indicates the way that they stand in the complex, the structure of the complex. The evidence is 3.24(4):

> The contraction of a symbol for a complex into a simple symbol can be expressed in a definition.,

which seems to indicate that, when we reverse the process and define the

simple symbol standing for the complex, the definition will be expressed in the symbol for the complex. Now, the symbol for the complex must be the proposition which describes it:

> 3.24(2) A complex can be given only by its description, which will be right or wrong. A proposition that mentions a complex will not be nonsensical, if the complex does not exist, but simply false.

And the context leads one to assume that the proposition describing the complex - when this is a complex of objects - is just a picture of the complex (see 3.1 - 3.24). We shall only be interested here in complete definitions, and these, then, are expressed as picture-propositions, in terms of the names of objects.

We might note two consequences of the fact that complete extensional definitions are given by picturing. The first is that we cannot completely define a word without asserting the existence of that for which the word stands. For, we will describe it by picturing it, and we cannot picture something without saying that what we picture exists - this is an essential part of what is said by picturing (see chapter 1, section II, A, 3). The second is that the definition, although given by description, will involve no generality whatsoever - it is what I will call 'perfectly definite'. The reason is that the description is by picturing, and this is nothing but a concatenation of definite references. Thus, if we let a word stand for a complex, making a reference to the complex, then when we describe the complex there is no loss of definite reference, but just what might be called a 'reference shift' - instead of referring to the whole, we refer to the individual parts, with an indication of how the parts stand together in the whole.

It would be useful to draw out two strands from this discussion of extensional definitions, and note them as corollaries. The first is just that, since these definitions are expressed in picture-propositions, they are expressed in words. We might add that these words which express the definitions will not themselves be further defined in the expressions (which is not to say that they will not be further definable), for if they were, then the definitions would not be expressed in <u>these</u> words, but instead in the words of the further definitions. The first corollary is, then:

> 2a. The definition of a word is expressed in words which are not themselves defined in the expression.

The second corollary is:

> 2b. The meaning of a word is the thing for which it stands.

This is virtually stated in the premise, and has been made use of in much of the foregoing discussion. We see additional evidence of this position in the series of passages:

> 3.2 In a proposition a thought can be expressed in such a way that elements of the propositional sign correspond to the objects of the thought.
>
> 3.201 I call such elements 'simple signs', and such a proposition 'completely analysed'.
>
> 3.202 The simple signs employed in propositions are called names.
>
> 3.203 A name means an object. The object is its meaning. ('A' is the same sign as 'A'.)

In any proposition the words can be analyzed to names of objects, the objects being the meaning of the names. This means that the meanings of the words

in any proposition can be analyzed to just objects, i.e. this means that they are just complexes of objects, if they are not simply objects. These complexes are just things, and if these are the meanings of words, then the meaning of any word is just the thing for which it stands.

To amplify this corollary, the position that the meaning of a word is the thing for which it stands represents a shift from a rather neutral matter-of-fact view about the words in discourse, namely that words in discourse, most of them at any rate, may be said to stand for something, and that in some sense what they stand for is their meaning, or what they mean. As Wittgenstein points out in the Investigations,

> When we say: "Every word in language signifies something" we have so far said nothing whatever; unless we have explained exactly what distinction we wish to make. (sect. #13)

And, along with this neutral view, goes the fact that when we say that a word stands for something, in some sense its meaning, it could be said to name that something. The 'in some sense' is doing a good deal of work in this neutral view, and it is more or less equivalent to the qualifications that when we talk about words in discourse in this way, we are talking about them apart from any particular context of use, and that this meaning which we talk about here is not, or not necessarily, their meaning in a primary - or even a generally allowable - sense.

And we get the shift to Wittgenstein's position in corollary 2b, if we remove these qualifications, retiring the 'in some sense'. We then have the position that any meaning of any word always occurs as a nameable - as a thing to be stood for by the word - within or outside of any context of

use, with the linguistic consequence that all words in all propositions - including those of ordinary language - operate as names by making references. We can see this shift in the Notebooks passage:

> We can even conceive a body apprehended as in movement, and together with its movement, as a thing. So the moon circling round the earth moves round the sun. Now here it seems clear that this reification is nothing but a logical manipulation - though the possibility of this may be extremely significant.
>
> Or let us consider reifications like: a tune, a spoken sentence. (19.5.15. See also 20.5.15.)

We have the admission that the 'reification' - the treatment of anything as a thing which can be stood for, named, is a 'logical manipulation', but nevertheless it is 'extremely significant', presumably because this reveals the paradigm form into which all meanings can be cast. We see this road taken in the very next entry:

> A complex just is a thing! (20.5.15).

and we see an indication of the linguistic consequences with respect to ordinary language propositions in, e.g.

> .....But it may also be that the proposition "The book is lying on the table" represents my sense completely, but that I am using the words, e.g., "lying on", with a special reference here, and that elsewhere they have another reference. What I mean by the verb is perhaps a quite special relation which the book now actually has to the table. (Notebooks, 20.6.15.),

the point being that Wittgenstein now talks of a word in ordinary discourse as functioning by making a reference in the unlikely case of the words "lying on".

While the position of corollary 2b is certainly in the Tractatus as well as the Notebooks, as we have seen, the linguistic consequence - that all words, including those of ordinary language, now operate as names - does not seem to survive the transition from Notebooks to Tractatus. In those few passages in the Tractatus in which Wittgenstein talks of ordinary language, he seems to indicate that the words in the proposition of ordinary discourse operate in the diverse ways usually attributed to them in any neutral view of language (see 3.323, 5.473, 5.4733). Given the corollary 2b., I do not think that Wittgenstein is entitled to this neutral view.

Be this as it may, while Wittgenstein can be seen to recognize that his 'meanings' are things named or referred to, he does not seem to recognize that such 'meaning' normally includes an aspect of the reference to the thing That is to say, if I take the meaning of the expression 'the table' to be the table, then this does not mean that the meaning is just the table considered in itself, although this is in fact the position that Wittgenstein takes, in saying that the meaning is the thing stood for. Rather, it is the table qua object of reference, i.e. the table considered in the way I am referring to it - e.g. as a whole, as opposed to in parts. For while the table, say, is equivalent to four legs and a top connected in a certain way, when I mean the table it does not follow that I mean four legs and a top connected in a certain way. Wittgenstein's position ignores this, which leads him to commit at several points a reference shift fallacy, viz. giving reference to parts for reference to whole, and vice versa. (I assume that this is what Wittgenstein is getting at in the Investigations, #63.)

Before closing the discussion of this corollary, it should be made clear

that the position it presents is not in itself equivalent to one which maintains that if a word has meaning, then it is entailed that the thing which is its meaning is something existing (or subsisting). That is to say, it is perfectly within the spirit of the corollary to say that the meaning of 'The Round Table' is The Round Table, that the expression stands for the thing, but this is not equivalent to saying that because 'The Round Table' has meaning, there must be something in the world which answers to the expression. It is easy to mistake the latter for the position of this corollary, because this is a position held by Wittgenstein. This position is, however, something more than that of the present corollary, and will be taken up as a separate premise (see premise 5.).

A final note: it might be thought that the requirements which this premise imposes on the meanings of words, viz. that they be capable of reification, treatment as a thing to be named, and that they be susceptible to extensional analysis, entails a restriction on the meanings which words can have. But I do not think that such a restriction amounts to anything. For, on the one hand, it seems that anything is capable of reification, or, as Strawson notes, 'being a possible object of identifying reference does not distinguish any class or type of items or entities from any other.' (Individuals, p. 137). On the other, the idea of 'component part' involved here in extensional analysis is so broad that anything not an absolute simple could be conceived as having parts and thus being analyzable extensionally. Indeed, if there is a restriction on discourse at all, apparent in the Notebooks and Tractatus, it is a restriction to empirical discourse, to description of observables, ruling out such things as statements of metaphysics. But this does not seem to derive from premise 2.

3. We come now to the most important premise of the argument, premise 3:

> If a word stands for a complex, then if the word has a meaning, this meaning can be given only by its definition.

We see this position expressed both in the Notebooks, e.g. with:

> The name of a complex functions in the proposition like the name of an object that I only know by description - The proposition that depicts it functions as a description. (30.5.15; see also, 15.5.15.),

and in the Tractatus, with:

> 3.24(2) A complex can be given only by its description, which will be right or wrong. A proposition that mentions a complex will not be nonsensical, if the complex does not exist, but simply false.

This is the description which we have seen to give the definition of the word (see supra. p.75), and the position is that, if a word stands for a complex, then the description of the complex - the definition - must replace the word when the complex is mentioned in discourse. We might put this a bit differently by pointing out that if a word stands for a complex, then the complex is its meaning, and it has meaning by referring to the complex. Then the premise is saying that we only have reference to the complex by giving this description or definition.

It is important to be clear, however, that this position does not amount to saying that where we have reference to a complex this reference must be lost - since we replace the reference with a description. It will turn out that this premise requires complete definition, i.e. analysis to objects (see corollary 3d) and thus a description will consist of a picture-

proposition and so will give a perfectly definite description. This, as I have noted, involves reference shift rather than loss of reference. And, since Wittgenstein indulges in the reference shift fallacy, not only is there no loss of reference, but the reference - a la Wittgenstein - remains unchanged, since reference to the parts can be equated with reference to the whole. For this reason, premise three, while incorrect, is not entirely outlandish. It betrays at least a vague awareness that the description of something, or the ability to describe it, is presupposed in the definite reference to it. For, when Wittgenstein says that a complex must be given by analysis, or description, this does not mean that we have description rather than definite reference, but - instead - that we have definite reference only with, or after, description; this is the force of the premise Aside from reference shift, there is the difficulty here that Wittgenstein makes description something which we must in fact do, rather than something which we must be able to do. While it is probably correct to say that we must be able to describe things to which we refer, it is of course false that we in fact always - or even usually - describe our referent in the process of referring to it. While this second mistake is perhaps made on the right road to a theory of referring, it is nonetheless not negligible - it will be seen that a corollary necessary to the argument (i.e. corollary 3d.) turns on this mistake.

To turn now to some corollaries, it follows almost at once from the premise that,

> 3a. Where W is any word in proposition P, if W stands for a complex, then if P has a determinate sense, then W must be defined.

For, if a proposition has sense, then all the words in the proposition must have meaning, and, according to the premise, if any word stands for a complex then, if it has meaning, then it is defined. Now, if we invoke corollary 2a, then we can say of this definition, that if it must be given, then it must be expressed in words which are not further defined in the expression. Moreover, if it must be given, then we must know these words which are not defined, for, it is a general truth, that if a word is defined, then we must know the meanings of the words which are used to express the definition - or, more generally, we must know these words. We can express this as the lemma:

> 3b. If (W stands for a complex), then (If (P has determinate sense), then (we know the undefined words which define W)).

This lemma will constitute a step in my presentation of the argument, and I can give another step by tacking on here as an additional corollary the general truth that:

> 3c. If (we know the undefined words which define W), then (there are undefined words which define W).

That is to say, if we know a given word, then there of course <u>is</u> this given word.

We can get here one more corollary - and one more related lemma as a step in our argument - by considering the bearing of the premise on the nature of these 'undefined words which define W'. The premise states that

> If a word stands for a complex, then if the word is meaningful, then it must be defined.

If we take the existence of an undefined word as an hypothesis, then, with

respect to this word this constitutes a negation of the final consequent of the premise, and it entails the negation of at least one of the antecedents. Thus, either this undefined word is not meaningful, or it does not stand for a complex. If the undefined word is to define W, then it must be meaningful and therefore it must not stand for a complex. We can state this in the form of a corollary,

> 3d. If (there are undefined words which define W), then (there are words which do not stand for complexes.)

It is in connection with this corollary that Wittgenstein's mistake of giving what we in fact do where what is called for is what we must be able to do, comes into play. If we corrected this mistake in the premise, then we would read 'definable' for 'defined'. But then the antecedent of corollary d would not - on the basis of the corrected premise - entail its consequent. For the antecedent of the corollary would no longer be a negation of the final consequent of the premise: a word's being undefined does not constitut the negation of its being definable - there is no incompatibility between it happening that a word is undefined and its being definable. And, hence, the antecedent of the corollary would no longer entail the negation of either of the antecedents in the premise.

However, since, according to corollary 2b, the meaning of a word is the thing for which it stands, then - given that the words which do not stand for complexes are meaningful - these words must nonetheless stand for something. And, if what they stand for is not complex, then what they stand for and mean must be simple, in fact absolutely simple. On the basis of this, we can convert corollary 3d into the lemma:

3e. If (there are undefined words which define W), then (there are words which stand for absolute simples).

4. Premise 4:

Any word or expression in ordinary discourse stands for a complex.

By the examples he used in the Notebooks, and indeed by some very obvious facts about ordinary discourse, Wittgenstein is committed to the position that at least some of the words in ordinary discourse stand for complexes, and, in virtue of passage 4.23 of the Tractatus, viz.,

> It is only in the nexus of an elementary proposition that a name occurs in a proposition.,

this commitment amounts to a commitment to the position given in the premise. The reason is this: 'Names' for Wittgenstein are the words which stand for the absolute simples (3.2-3.23). By 4.23, names occur only in elementary propositions, and elementary propositions consist only of names (4.22). This means that if a word standing for a complex occurs in a proposition, this renders the proposition non-elementary, and this in turn means that all of the words in the proposition stand for complexes - i.e. none of them can be names. Now those words in ordinary discourse, which obviously stand for complexes - those words which Wittgenstein would treat as standing for complexes - can be combined in propositions with practically any other word in the language. Thus, by this process of 'contamination', every word in ordinary discourse must stand for a complex. It follows immediately as a corollary, that

4a. W stands for a complex.,

where W is any word in P, P being a proposition or ordinary discourse.

5. Premise 5, the final premise, is:

> If a word has meaning, then the thing for which it stands is something existing, or subsisting.

This premise is the sequel to corollary 2b's statement that the meaning of a word is the thing for which it stands, and it expresses a position deeply embedded in Tractatus theory. As we have seen, with regard to the meanings of words standing for complexes, we cannot - with the picturing description - give the meaning, define the word, without asserting the existence of what is described in the definition; we cannot give meaning without saying that something exists. We see oblique reference to this in the passage

> 3.24(2) A complex can be given only by its description, which will be right or wrong. A proposition that mentions a complex will not be nonsensical, if the complex does not exist, but simply false.

It might be thought - the point seems to be - that we would conclude from the falsity of a proposition defining a word that, since the word now has no meaning - what it would stand for not existing - the proposition containing it would be nonsensical. However, the proposition is not nonsensical, for, containing a definition, it can be expressed as a truth-function, and a truth function of a false proposition is not nonsensical, but - e.g. if it happens to be a logical product - false. With regard to meanings of words standing for absolute simples, the Tractatus abounds with evidence that the meaning is an existent (or subsistent) - see, e.g. 2.13, 2.15121 - 2.1515, 3.2 - 3.23 And thus the corollary follows at once, that:

5a. If (there are words which stand for absolute simples), then (there are absolute simples).

6. The Argument:

I will proceed by first listing - and symbolizing - the steps which we have developed in the foregoing. They are:

1c. (P has determinate sense.) : 'p'

3b. If (W stands for a complex), then (If (P has determinate sense), then (we know the undefined words which define W)). : 'x) (p) q)'

3c. If (we know the undefined words which define W), then (there are undefined words which define W). :'q) r'

3e. If (there are undefined words which define W), then (there are words which stand for absolute simples). : 'r) s'

4a. (W stands for a complex.) : 'x'

5a. If (there are words which stand for absolute simples), then (there are absolute simples). : 's) t'

And the argument to simples, objects, is, then, very straightforward indeed:

1. x	corollary 4a.
2. x) (p) q)	lemma 3b.
3. p	corollary 1c.
4. p) q	1,2 Modus Ponens.
5. q) r	corollary 3c.
6. r) s	lemma 3e.
7. s) t	corollary 5a.
8. t	3,4,5,6,7 Modus Ponens + 3-stage Hypothetical Syllogism.

t = there are absolute simples, objects.

Q.E.D.

In summary the argument is essentially this: ordinary discourse is such that we must know certain defining words for the sake of determinate sense

(steps 1 - 4). If we must know these words, then there must be these words (step 5), and if there must be these words then there must be what these words stand for (step 7). These words which we know turn out to be words standing for absolute simples (step 6), and therefore there must be absolute simples (step 8). Put even more baldly, Wittgenstein is saying that when we use language we analyze all analyzable words - i.e. all words of ordinary discourse. Since, if we are to have sense, the analysis cannot carry on indefinitely, we must have names of absolute simples to end the analysis. And, if we have the names of absolute simples, then there must be absolute simples. It is noteworthy, that except for an echo, i.e.

> 3.23 The requirement that simple signs be possible is the requirement that sense be determinate.,

this argument receives no explicit mention in the Tractatus. This can be explained, I think, by the fact that premise 3 disappears from explicit favor. The reason for this seems to be very much tied up with a difficulty in the above argument as it stands, and I now turn to a consideration of this difficulty, and the changes in premise 3, and, hence, the argument, which the difficulty necessitates.

B. The Epistemological Difficulty

It is important to stress that epistemological considerations enter the above argument unavoidably, since it is only because we must know undefined words that there must be undefined words, and the argument turns on the fact that we do know these undefined words. This leads us to an epistemological difficulty, which might be formulated as a sixth premise, viz.

We do not know any words which stand for absolute simples.

That is to say, we do not know the names of any of the objects. This is probably as much as to say that we are not acquainted with any of the objects, for the only way to know the meaning of a name would seem to be by acquaintance. The reason is that objects are individuals which cannot be given by description - this is the point of their simplicity, that they are rendered indescribable, and, therefore, indefinable. This needn't be pressed however, for it suffices to show that we cannot know any names, and this is easily enough done. We have already shown, in premise 4, that the words in ordinary discourse must all stand for complexes. If the words of ordinary discourse are the only ones we know - i.e. those words which can enter a proposition with a word in ordinary discourse - then we already have our result. Moreover, ordinary language is such that were we to analyze - successively define - a word standing for a complex, by analyzing the complex extensionally, the analysis would never come to an end. That is, ordinary language is such that its capacity for analysis, its capacity to detect further complexity where once we have complexity, has no limit. This fact is surely acknowledged by Wittgenstein, particularly in his Notebooks examples, e.g.,

> .....My difficulty surely consists in this: In all the propositions that occur to me there occur names, which, however, must disappear on further analysis. I know that such a further analysis is possible, but am unable to carry it out completely.....(16.6.15).

Therefore, since we do not know words standing for simples in ordinary discourse, nor in anything we can derive from the words of ordinary discourse, we do not know these words, and, indeed, cannot. Likewise, the simples,

as the meanings of these words, are not objects of knowledge. In the Tractatus it appears that Wittgenstein has not only acknowledged this fact, but worked his way around it, e.g.

> 5.5562 If we know on purely logical grounds that there must be elementary propositions, then everyone who understands propositions in their unanalyzed form must know it.

This passage gives the impression that an argument to objects is possible which does not require the rejection of premise 6, an argument for which this premise is no difficulty. It is easily shown that the present argument is not such an argument.

It will be recalled, from corollary 3d that the undefined words turned out to be words not standing for complexes, i.e. - as in lemma 3e - words standing for absolute simples. Now if we do not know any of the words standing for absolute simples, then we do not know any of our undefined words. Thus, given premise 6, we can draw a lemma which contradicts the turning point of our argument, viz.

a. Not (we know the undefined words which define W). : '-q'

And, introduced into our argument, it quite rapidly produces a contradiction, e.g. with the premise that ordinary discourse has definite sense:

9.	-q	lemma 6a.
10.	-q) -p	4 Transposition.
11.	-p	9,10 Modus Ponens.
12.	p.-p	3,11 Conjunction

I.e., P has determinate sense, and P does not have determinate sense. In short, the position put forward by this argument, that the determinate

sense which we have depends upon knowledge of objects, is a self-contradiction.

We must eliminate this self-contradiction, and, since premise 6 is there to stay, this requires the elimination of dependence of determinate sense on the knowledge of words standing for the absolute simples. This dependence amounts to steps 4 and 6, i.e. that we must know the undefined words, and that these undefined words are words standing for absolute simples, and so we must eliminate the one or the other, or both. This will of course vitiate the argument as it stands, so we must consider not only how Wittgenstein makes the eliminations, but how and whether he then gives an alternative argument to objects. These will occupy the final two sections of the consideration of this argument.

C. The Adjustment of the Argument

The way in which Wittgenstein adjusts his argument to eliminate steps 4 and 6, appears to be to adjust premise 3, making it into premise 3' by circumventing the need to give the meaning of a word by its definition. Before beginning the discussion of this, however, I would make two disclaimers. First, while I speak here in terms which suggest development of Wittgenstein's thought - e.g. talking of 'adjustments' - I am not interested in such historical considerations, although undoubtedly the adjustment of premise 3 did occur - if there was such an adjustment at all - in the course of writing the Notebooks. Rather, I am interested in premise 3 and its adjustment, 3', as two strands present in Wittgenstein's thought. I justify this interest in that while 2' should supersede 2 - the two of them

being contradictories (see infra., p.97) - it in fact does not; their being contradictories does not prevent Wittgenstein, in the Tractatus, from hanging onto both (see infra. p. 105). The second disclaimer is just that these considerations of 3' are going to be a good deal more speculative than those which have preceded, since they involve both dredging up a good deal from the murky depths of the Notebooks and citation of some of the more opaque passages in the Tractatus.

At any rate, Wittgenstein seems to produce 3' by introducing the notion of prototype (or 'proto-picture' - as 'Urbild' is translated by Anscombe in the Notebooks.). Starting from the account of 'prototype' given in 5.521 - 5.526 of the Tractatus, it can be said initially that a prototype is just a general description of something, say, in virtue of the predicates which it has in common with other things. I will call the description given by a prototype, a 'prototype-description'. For example, if I say 'X is a dog', this is a prototype-description of X, and it involves generality, insofar as the predicate providing the description, 'a dog', does not apply uniquely to X and thus does not uniquely identify X.

However, the prototype-description does not appear to be given in anything said; it is not expressed in a proposition. Rather, it seems to be given in the application or use made of the word standing for the complex to be described. This we see in the Notebooks:

> The fact that there is no sign for a particular proto-picture does not show that that proto-picture is not present. Portrayal by means of sign-language does not take place in such a way that a sign of a proto-picture goes proxy for an object of that proto-picture. The sign and the internal relation to what is signified determine the proto-picture of the latter; as the fundamental coordinates together with the ordinates determine the points of a figure. (8.5.15)

I assume that the mathematical analogue here is something like an equation in which the values which determine the points of the figure representing the equation are implicit in the equation, and are worked out when needed. This 'working out' in the case of language may occur in use, the use showing of what sort of complex we have a proto-picture, an implicit picture:

> 3. 262 What signs fail to express, their application shows. What signs slur over, their application says clearly.

The idea of the working out of the description of the complex stood for by the sign, by seeing how the sign is used in application, we see in a Notebooks example as well:

> .....If, e.g., I call some rod "A", and a ball "B", I can say that A is leaning against the wall, but not B. Here the internal nature of A and B comes into view.
>
> A name designating an object thereby stands in a relation to it which is wholly determined by the logical kind of the object and which signalises that logical kind.
>
> And it is clear that the object must be of a particular logical kind, it is just as complex, or as simple, as it is.
>
> "The watch is sitting on the table" is senseless! Only the complex part of the proposition can be true or false. The name compresses its whole complex reference into one. (22.6.15)

Here the nature of the ball and the rod are described by seeing how the signs standing for them can be used. To resurrect the distinction between what is shown and what is said, these prototype-descriptions seem to be something shown rather than something said, something shown in the use to which we put the word standing for the thing being described.

Because this description describes a thing by showing the use of the

word standing for it - rather than by picturing the structure of the thing - this sort of description can be applied to objects as well as to complexes (5.526 seems to give an example of this - see note 47, below). And the description of an object, o, will consist of the showing of the combinations of other objects with which o can be configured, this shown by the combinations of other names with which the name of o, 'o', can be concatenated. This is something shown by the picture-propositions which the name of o can enter; it is not said by these propositions, for what picture-propositions say is the assertion of the existence of a complex, a fact.

It is in connection with the application of prototype-description to objects that my initial characterization as a description, by predicates involving generality, best fits. For, the description will be shown by the combinations of names in picture-propositions with which, e.g., 'o' can be concatenated, and in picture-propositions the other names with which 'o' can be concatenated will give the predicates of o. That is, the predicates of o are just the other objects with which it can be combined, i.e. its form (see Wittgenstein on 'internal properties', 2.0123, 2.01231, 2.0141; see also supra. chapt. 1, sect. I, B). Thus, when we give the application of 'o', we are giving the predicates of o. If we move away from picture-propositions, and objects, the idea of prototype-description as description by predicates does not fit as well - for it is not clear that the predicates of a complex thing are given by the use of the word standing for it; this is not the case in ordinary language - the idea of predicate here is not this broad. Nevertheless, even in ordinary language, it does indicate something about the nature of a thing, its predicates, that we can use the word standing for it in some ways and not in others. In any case - whether

with application to objects or to complexes - we can see that generality inevitably enters with the prototype-description. When we show with what combinations of other objects o can be configured, we do not show that these configuration-possibilities are unique to o. More broadly, when we are describing a complex by the use of the word standing for it, we do not show that this use is unique to this word - that the description is unique to the complex for which it stands.

Wittgenstein introduces the idea of prototype-description into the contex of the requirement of a definition to give definite reference, stipulated by premise 3, in the Tractatus passage,

> 3.24(3) When a propositional element signifies a complex, this can be seen from an indeterminateness in the propositions in which it occurs. In such cases we know that the proposition leaves something undetermined. (In fact the generality-sign contains a prototype.)

This passage is directly preceded by the paragraph from which we derived the requirement stipulated in premise 3, and it is therefore puzzling, for it seems to indicate that prototype-description will do instead of definition, thus taking back what 3.24(2) put forward. It becomes less puzzling, however, if we recall that this definition involves knowledge of the names of objects, so that while such a description may be theoretically possible, it is in fact impossible. The juxtaposition of the two paragraphs seems to indicate the ideal, but then provide for the practical use of language. In practical use, the use of the word will provide sufficient description to make possible reference with the word, giving it meaning, so that we can use the word as it is - it is permitted that 'a propositional element signifies a complex' - without replacing it with the expression for a description.

Of course, in the case of prototype-description, the description does not itself contain the definite reference as did the definition - being a concatenation of names -; here the reference must be introduced aside from the provision of the description which makes the reference possible.

The proposition including the prototype-description will then involve an 'indeterminateness', but it will be an indeterminateness with respect to the nature of the complex (our prototype-description will not tell us of what objects it consists). It will not be an indeterminateness with respect to which complex - the prototype-description allows us to identify the complex, even though it does not allow us to specify completely what it is like. That is to say, a proposition which employs a prototype-description to permit the making of a reference will involve generality insofar as it involves this sort of description; but it is not really itself a general proposition, of the form (Ex)Fx or (x)Fx, because it is more than the prototype-description; it also includes the definite reference which the prototype-description makes possible.[47]

The prototype-description, then, is here a device for providing the description necessary to reference, without resorting to the names of objects We see an indication that this is such a device, in the Notebooks:

> .....For if I am talking about, e.g., this watch, and mean something complex by that and nothing depends upon the complexity, then a generalization will make its appearance in the proposition and the fundamental forms of the generalization will be completely determinate so far as they are given at all.
>
> If there is a final sense and a proposition expressing it completely, then there are also names for simple objects. (18.6.15).

The point seems to be that unless my purposes compel me to talk about a thing in terms of its components - giving it the perfectly definite description which produces a definition - then a prototype-description will be adequate for my purposes, a description involving generality (see also 21.6.15, last paragraph). (This is not to say - Wittgenstein indicates - that the prototype-description provides the 'final sense' - see <u>infra</u>. pp. 98-99.)[48]

Since we now have this device of prototype-description, premise 3, <u>viz</u>.

> If a word stands for a complex, then if the word has a meaning, this meaning can be given only by its definition.,

becomes premise 3', i.e.

> If a word stands for a complex, then if the word has a meaning, this meaning can be given by its definition, or by prototype-description of the complex.

It will be noted that premises 3 and 3' are contradictories, since 3, in stipulating that definition is the only way in which the meaning of a word standing for a complex can be given, is of the form - (Ex)Fx, where 'F' = 'a way of giving the meaning of the word other than by definition'. 3', on the other hand, in effect asserts - with its alternative of prototype-description - that there is a way of giving the meaning of the word other than by definition, and so is of the form (Ex)Fx. That is, the context indicates that premise 3' is really of the form:

> If a word stands for a complex, then if the word has a meaning, then there is a way other than definition to give the meaning of the word, <u>viz</u>. prototype-description of the complex.

If we now replace premise 3 with premise 3' in our argument, it will be found that the corollaries of 3 (with the exception of 3c), no longer follow. If a word does not have to be defined in order to be meaningful, then the word does not have to be defined for the proposition containing the word to have sense. This eliminates corollaries 3a and 3b. If a word standing for a complex can be meaningful and yet be undefined, then the fact of an undefined meaningful word does not indicate that the word does not stand for a complex. This eliminates corollaries 3d and 3e. Now, step 4 in our argument was dependent on corollary 3b, and step 6 was corollary 3e; the replacement of premise 3 with premise 3' therefore eliminates these two steps, as required. This eliminates the dependence of determinate sense on knowledge of the names of objects. But this also results in the collapse of our argument. The elimination of this difficulty in the argument in effect eliminates the argument. We must now see if Wittgenstein can provide an alternative argument, proceeding from the nature of language to establish the existence of objects.

D. The Alternative Argument

Before introducing the alternative argument, I might dispose of an attemp to salvage the argument already given - call it 'argument A' - which, if it is not made by Wittgenstein, is often made on his behalf. This attempt adds to premise 3', that, of the two modes of giving the meaning of the word, giving it by means of definition provides the <u>real</u> meaning, or the 'final sense' (see <u>supra</u>. p. 97). It would then follow, by our argument, that to get the 'final sense' of a word or proposition, we would have to have objects That is to say, this move would replace the connection between determinate

sense and objects with a connection between 'final sense' and objects. But, in the first place, given that both modes of giving the meaning still provide determinate sense, the existence of objects would not follow from the conditions of determinate sense, but only from the conditions of final, or real determinate sense. Indeed, it is not patent that we have this 'final sense' at all, so that while 'final sense' may necessitate objects, the having of 'final sense' really cannot be taken as a premise. That is to say it cannot be taken as a premise unless ordinary discourse can be shown to have not only determinate sense, but final sense as well. But to show this would require that the ordinary determinate sense somehow amounts to a 'final sense' in terms of objects, and this in turn would require, minimally, that there are objects. Thus we could take our having 'final sense' as a premise only by assuming what the premises would be used to prove - a rather circular enterprise, this. In the second place, even granting the premise, we could not conclude that there are objects, thus salvaging argument A, for the argument then involves exactly the difficulties which I have already outlined: the premise (here, that we have final determinate sense)necessitates conditions which cannot be fulfilled, viz. the knowledge of names, and thus the argument leads us to contradict the premise. The rider which this salvage attempt adds to premise 3' in effect puts it back to a form of premise 3, and this puts us right back into the difficulties which prompted the replacement of 3 with 3'.

If we cannot salvage argument A, we can at least salvage enough from it to introduce the required alternative argument, using, in particular, the considerations involved in premises 2 and 3'. It can be noted first that,

i. If there are no objects, then all words stand for complexes,

since - by corollary 2b - the meaning of a word is the thing for which it stands. By premise 3',

ii. If all words stand for complexes, then all words can be defined.,

which is not, of course, to say that they need be, since the alternative of prototype-description will always be open. Now, if a word can be defined, then - according to the nature of definition, stipulated by premise 2 - there will be a proposition asserting the existence of the thing for which the word stands. That is, the definition will be a picture of the complex stood for, and the picture asserts the existence of the complex. And thus we can say,

iii. If all words can be defined, then, for any word, there will be a proposition asserting the existence of the thing for which the word stands.

Now, invoking corollary 2b again, since the meaning of a word is the thing for which it stands, all propositions consist of words whose meaning is the thing stood for, or - if they are expressed as truth-functions - they are expressed in terms of propositions which consist of these words. Thus, if propositions have sense, then these words must have meaning. That is to say, if propositions have sense, then what these words stand for must exist.[4] And, if for any such word there will be a proposition asserting the existence of the thing stood for, then this is as much as to say that a proposition's sense will depend upon the truth of other propositions making such assertions Thus,

> iv. If, for any word, there will be a proposition asserting the existence of the thing for which the word stands, then, any proposition's sense depends upon the truth of other propositions.

Steps i, ii, iii, and iv form a 3-staged hypothetical syllogism, so that we can conclude,

> v. If there are no objects, then any proposition's sense depends upon the truth of other propositions.

It would be convenient to express this in the modally weaker form,

> vi. If there are no objects, then any proposition's sense <u>can</u> depend upon the truth of other propositions.

Step vi, gotten from the considerations involved in argument A, serves as an introduction to an alternative argument, for if we could derive a fallacious consequence from the consequent of step vi, then we would have a two-staged <u>modus tollens</u> which would yield the conclusion that there are objects - the negation of the antecedent of vi. We see such an argument set up in the <u>Tractatus</u>, with the three passages:

> 2.021. Objects make up the substance of the world. That is why they cannot be composite.
>
> 2.0211 If the world had no substance, then whether a proposition had sense would depend on whether another proposition was true.
>
> 2.0212 In that case we could not sketch out any picture of the world (true or false).

I include the first of these passages merely to indicate that 'substance' can be read as 'objects' in the second passage, which, with the third, contains the actual argument. As Griffin points out (see <u>Wittgenstein's</u>

Logical Atomism, p. 65), the argument is in the form of a two-staged modus tollens, something which could be formulated:

> vii. If not (there are objects) then (a proposition's sense can depend upon the truth of another proposition).
>
> viii. If (a proposition's sense can depend upon the truth of another proposition) then (we cannot sketch out any picture of the world).

Steps vi and vii are virtually indentical (except that Wittgenstein uses the singular where I use the plural, for the 'other propositions' - a difference which I think insignificant), and I will consider step vii accounted for by the considerations derived from argument A. Step viii appears to do the job of providing the fallacious consequent of the consequent of vii, and this wants more consideration.

Step viii does not have antecedents in argument A, and it does not seem to receive elaboration either in the Notebooks or in the Tractatus. Nevertheless, we can speculate that the point is something like the following: If a proposition's sense depends upon the truth of what is an empirical proposition (and the propositions asserting the existence of the meanings - complexes for which words stand - are empirical propositions, asserting the existence of facts or states of affairs in the world), then we could not use the proposition without knowing the truth of these empirical propositions, without knowing something about the world. For, it seems to be a truism that use of a proposition with sense necessitates that we know whether or not we have sense - and knowing whether we have sense is knowing whether our words have meaning, and knowing this is knowing whether complexes exist in the world. But if, in order to use language, we must know something about

the world, then we cannot give a picture of the world a priori - in Wittgenstein's terms, we cannot then 'sketch out' a picture of the world (I take it that the idea of 'sketching out' is just picturing a priori). Thus, putting together the hypothetical syllogism, we get step viii.

And Wittgenstein seems to take it as a premise that we can, and indeed must be able to, give an a priori picture of the world. Thus the consequent of step viii is fallacious, and this at once yields the conclusion that there are objects. Thus the alternative argument from the nature of languag to the existence of objects, apparently free from the epistemological difficulties of argument A.

This freedom from difficulty is illusory, however, for the argument, in passing, entails premise 3. The reason is that,

> ix. If not (premise 3), then (a proposition's sense can depend upon the truth of another proposition).

For, not (premise 3) = (premise 3'), and premise 3', permitting as it does the use of words standing for complexes as they are, without being replaced by definitions, clearly entails that a proposition's sense can depend upon the truth of another proposition - the 'other' propositions here will be those asserting the existence of the complexes stood for by the words. And the consequent of ix is the antecedent of viii, and given that the negation of the consequent of viii is taken as a premise, in our alternative argument, then the negations of the consequent and then the antecedent of ix result, yielding the position of premise 3.

In less formal terms, the alternative argument takes as a premise that

we must be able to sketch out a picture of the world. This entails that the propositions that we use cannot depend upon the truth of others, and this means that the propositions which we use cannot name complexes. Thus, in those propositions in which we find complexes mentioned, we must exhaustively define the complexes in terms of objects. This is the position of premise 3, although it does not occur here as a premise, but rather as a consequence of the argument, and it is put forward here not for the sake of enabling us to make definite reference, but for the sake of eliminating the dependence of sense on truth. Nevertheless, it lands us back in the self-contradictory position of argument A, where the successful use of language (here with respect to its being a priori, rather than having determinate sense) necessitates the impossible condition that we use in discourse and therefore know, the names of objects.[50]

We are now ready to draw out from this account of the argument to objects Wittgenstein's position on the linguistic role of picture-propositional language. We can do this by giving little more than a summary of the foregoing considerations.

II. The Linguistic Role of Picture-Propositional Language

We have seen Wittgenstein give two arguments to objects, and we have seen both fail in that both embrace the position of premise 3. For, premise 3 leads to the self-contradictory position that we must know and use the names of objects for the sake of determinate sense. This position is self-contradictory because we can neither know nor use the names of objects in any sort of discourse. Since picture-propositional language is the locus,

and the only locus, of names of objects, this is as much as to say that we cannot use picture-propositional language in any sort of discourse. And, in these terms, the position is self-contradictory because the use of picture-propositional language in discourse is demanded by premise 3, while the use of this language in discourse is an impossibility. Indeed, it can be said that both arguments fail in that they demand of picture-propositional language a linguistic role which such language cannot play.

Now, we have seen that Wittgenstein rejects premise 3 in favor of its contradictory, premise 3', thus retreating from the demand that picture-propositional language be usable in discourse - that it be able to fill this role. And we have seen that he does so with the recognition that the names of objects can neither be known nor used. This amounts to the recognition that picture-propositional language is not usable. Of course, Wittgenstein contradicts himself, by inadvertently reintroducing the position of premise 3, in connection with the alternative argument. This reintroduces the position that picture-propositional language must be used in ordinary discourse. But, from all indications, this reintroduction is inadvertent. And we can thus conclude that Wittgenstein's position is that picture-propositional language does not, and cannot, fill the role of use in discourse.

Having thus given Wittgenstein's position on the linguistic role of picture-propositional language in the negative, there is little left to say in the positive; if picture-propositional language cannot be used in any sort of discourse, then this does not leave it with much of a linguistic role - with respect to ordinary discourse, or with respect to <u>any</u> sort of discourse. Wittgenstein's position, put positively, is that the picture-propositional

expressions are expressions into which ideally all propositions can be analyzed, although it is theoretically impossible to do so. In this sense, picture-propositional language can provide the expression for all propositions - but by this token, this linguistic role for picture-propositions is really a non-role. Indeed, one is tempted to ask whether a language which can be used in no form of discourse really deserves to be called 'language' at all.

Wittgenstein would probably defend his picture-propositional language by saying that, while it has really no linguistic role, nevertheless - could it be used at all - it would express 'final sense' of all propositions. The idea of picture-propositional language is at least the idea of such expression, and picture-propositional language could thus be said to have an ideal linguistic role. But, as I have noted, to maintain that the sense which would be expressed by picture-propositional language is a final sense, we would have to have established, minimally, that there are objects which form the ultimate constituents of the world (see supra., p. 99). And, although he does not recognize this, Wittgenstein has failed to establish that there are objects - both of his arguments fail. Picture-propositional language then, has neither a real linguistic role, nor - Wittgenstein to the contrary - an ideal linguistic role. And, thus having no linguistic role at all, the picture-propositional language is an ethereal entity indeed.

FOOTNOTES

1. This is not to say that these various categories are mutually independent, e.g. that we could have a spatial thing which was not also a dense thing, etc. (see infra. ,pp.27-29).

2. It may be that things like color and spatiality are not yet objects, because they are not yet really categorial simples. I.e., a color will have attributes of shade, tone, hue, etc., spatiality will have the attributes of shape, size, position, etc. Thus, to get to objects, we would have to talk about, e.g. 'shades of color', and 'spatial position'.

3. Indeed, Anscombe would seem to concur in this, as indicated by the passage from her note, 'Mr. Copi on Objects, Properties, and Relations in the Tractatus (Mind, 68, 1959):

> There is no difficulty, as Mr. Copi seems to think, about objects' having external properties. For example, a possible definite description of an object, e.g. 'R'b' - 'the (thing that is) R to b' would give possible external properties of it (cf. 4.023); of course it would not define the object. Or again, if aRb, 'Rb' gives an external property of a .

4. This passage shows that objects are attributables in that they are attributable to other objects by configuration. It does not necessarily follow from this, however, that objects are attributables in the sense in which I am interested, viz. the ordinary sense, in which attributables are categorial simples. For, all that we are shown here is that there is attribution by configuration, and, of course, the sense of 'configuration' has not yet been shown to be limited in this context to configuration of categorial simples.

5. It is an indication of how wrong Pitcher is, in suggesting that '𝕆' might name, that, as he himself states, if 𝕆 occurred as just a name in the proposition 𝕆(x,y), then the proposition would have to be 'a nexus, a concatenation of names.'(4.22) This would mean that the brackets '(' and ')' would also have to be names, and this is strictly forbidden by the Tractatus:

> 4.44(1) It is clear that a complex of the signs 'F' and 'T' has no object (or complex of objects) corresponding to it, just as there is none corresponding to the horizontal and vertical lines or to the brackets. - There are no logical objects. (my underlining).

6. The relevant passage is,

> There are functions which can give a true proposition only for one value of their argument because - if I may so express myself - there is only room in them for one. Take for instance, a proposition which asserts the existence of a colour R at a certain time T in a certain place P of our visual field. I will

> write this proposition "R P T", and abstract for the moment from any consideration of how such a statement is to be further analyzed. "B P T" then says that the colour B is in the place P at the time T, and it will be clear to most of us here, and to all of us in ordinary life, that "R P T & B P T" is some sort of a contradiction (and not merely a false proposition). Now if statements of degree were analyzable as I used to think - we could explain this contradiction by saying that the colour R contains all degrees of R and none of B and that the colour B contains all degrees of B and none of R. But from the above it follows that no analysis can eliminate statements of degree. (SRLF 168-169)

7. The fact that objects fit the role of universals in the context of configuration with other objects is no further <u>proof</u> that they are attributables as opposed to, say, ordinary physical things. Objects would fit the role of universals no matter what we take for them, so that if physical things were taken as objects, then they would fit the role of universals as well as would attributables - within this context of configuration with other objects

8. Wittgenstein adds, in a parenthesis to 2.06, that 'we also call the existence of states of affairs a positive fact, and their non-existence a negative fact.' In connection with this he may be playing with the idea that reality is the 'amount' of existence that we have, gotten by adding up in a quasi-mathematical way the positive and negative existences. And the point of 2.063 might then be <u>inter alia</u> that when we add up the existence in all of reality, we come out with the amount of existence in the world.

9. Wittgenstein seems to use the term 'situation' in place of 'fact' and 'state of affairs' where he wishes to emphasize that the world - and, hence its component facts and states of affairs - consists of the existence <u>and non-existence</u> of states of affairs, e.g.:

> 2.1 We picture facts to ourselves.
>
> 2.11 A picture presents a situation in logical space, the existence and non-existence of states of affairs.

It appears, then, that a situation is a fact or state of affairs considered <u>as a component of the world</u> - which includes with the existence, also the non-existence of states of affairs. Except for this difference in emphasis, the use of 'situation' seems to be alternatively synonymous with that of 'fact' and 'state of affairs' (see 2.0121, 2.0122, 2.014, 2.202, 2.203, etc.)

10. To go back to the marbles-in-the-bag analogy, we may be interested in dividing all the marbles into those which are outside the bag during a period of time Pt, call these the 'E-marbles', and those which are inside, call these the 'N-marbles'. Now, if at any time during Pt we are told that we have the totality of E-marbles, then we can get the N-marbles by just looking in the bag. But, during Pt, if we do not have this information about the <u>totality</u> of E-marbles, then from any or all of the E-marbles that we have we

cannot conclude about the marbles remaining in the bag that they are either E-marbles or N-marbles - for any of them might still come out of the bag before Pt elapses.

11. It is sometimes contended that Wittgenstein's objects must have infinite temporal duration. Griffin (Wittgenstein's Logical Atomism, p. 70), and perhaps Pitcher (Philosophy of Wittgenstein, p. 123), hold this position. The ascription of any temporal duration to objects must be wrong, however, because temporal duration is an attribute, and objects, being absolutely simple, can have no attributes - 'In a manner of speaking, objects are colourless.'(2.0232) It is noteworthy that Wittgenstein never does speak of objects in terms which necessitate the ascription of a temporal duration to them, but says that they are 'unalterable and subsistent' (2.0271). It would fit this manner of speaking to say that objects are 'timeless', and given that objects are 'in a manner of speaking, colourless', it might be best to regard objects, with respect to time, as timeless. The only possibl exception to this might be objects which are themselves parts of time, e.g. moments. Moments might be objects, because time is, after all, a form of objects (2.0251), and having this form, objects could enter temporal facts, which would involve being configured with temporal entities such as moments. But even here, I'm not sure that we would want to say that objects can have temporal duration - for it does not seem right to say that time itself, or any of its parts, has temporal duration; it is things in time which have temporal duration. Thus, no object - not even a temporal object - has temporal duration.

12. This position is not equivalent to a stronger claim that we cannot think of an object as outside a configuration - just taken singly and on its own. For there certainly is a difference between being excluded from combination and just happening to be outside a combination. Nevertheless, two factors in the Picture Theory, which I will develop in part II, do permit the stronge claim. The first is that what can be thought is identical with what can be said (see, e.g., 5.61(4), infra. p.) The second is that what can be said is confined to asserting the existence (and/or non-existence) of configurations, of states of affairs. Now, objects taken singly do not enter the content of meaningful speech; they can only be named, and this is not saying anything. Since naming an object is not saying anything, it is not thinking anything either. And since naming an object is the only way to deal with objects in language, it - or its mental counterpart - is the only way to deal with objects in thought. Therefore, we cannot think (of) an object as just happening to be outside a configuration.

13. Passage 2.0122,

> Things are independent in so far as they can occur in all possible situations, but this form of independence is a form of connexion with states of affairs, a form of dependence. (It is impossible for words to appear in two different roles: by themselves, and in propositions.),

does not, I think, conflict with this, since it can be read as referring to

the general form of objects - making the point again that objects in general must be able to occur in configurations.

14. It may or it may not, depending on how one views form. E.g., if I have three objects, a,b, and c, and stipulate that they can be configured ab, bc, ac, then we do not have any object configurable with just any other. And if the form is stated thus: 'the form of a is configuration to the right with b, and likewise with c', etc., then we can view the forms of a,b, and c as differing. However, it can be stated something like: 'the form of any object is configuration in pairs, with left-to-right alphabetical order' - in which case we can view the form of a,b, and c as the same. It would seem that regarding the form as simply the configuration possibilities is not, in itself, sufficiently specific and unambiguous.

15. An infinite sum yields a less than infinite number only when at least some of the terms of the sum become fractional - e.g. $1 + \frac{1}{2} + \frac{1}{4} + \ldots\ldots$ It is obvious that this does not happen here - the terms, which are added infinitely, are always configurations, never fractions of configurations.

16. Another way to get at this difficulty might be to give the argument a different slant, viz.: the premise, P, entails that there is a fixed stock of the E, or of the FCE'. We can put this: P entails P'. Now, if there are no objects, then this entailment is repeated <u>ad infinitum</u>, i.e., $P \supset P'$, $P' \supset P''$, $P'' \supset P'''$,.....; where P' asserts that there is a fixed stock of the FCE', P'' asserts that there is a fixed stock of the FCE'', ... The argument can then be put explicitly in the form of an indirect proof

1. P
2. There are not objects (-0).
3. $-0 \supset (P \supset P' \,.\, P' \supset P'' \,.\, P'' \supset P''' \,.\, \ldots\ldots P^{n-1} \supset P^{n}\ldots\ldots)$
4. $-0 \supset -P^{n}$
5. -P
6. P.-P
7. Therefore, 0, there are objects.

The difficulty in these terms is now the move from step 3 to step 4. That there is no final consequent is not the same as the final consequent - or <u>a</u> final consequent - being <u>false</u>. Infinitely regressive entailment does not necessarily falsify the initial antecedent.

17. The first of these questions is taken up in Wittgenstein's treatment of pictures, from about 2.1 to 3, and the second in his treatment of propositions, more or less throughout the whole of the 3's. I might note in connection with the second that Wittgenstein does not here explicitly discuss

propositions in terms of pictures, saving this for a section in the 4's, approximately 4.01 to 4.1. Nevertheless, it is in the 3's that the second explanation is given, and in considering this explanation, I will draw primarily from this section.

18. It is worth mentioning that the idea of an elementary proposition, a proposition which asserts the existence of a lone state of affairs, is not introduced until 4.21, well past the main discussion of picture-propositions (see note 9) - as though to steer clear of the idea that we picture states of affairs taken singly.

19. For the purpose of this discussion, I might make clear the relation between correlation and reference. We have correlation when we single out some thing and make a stipulation that some other thing will be associated with it, e.g. a name. Thus correlation involves reference, but is more than reference, in that we could refer to something without definitely associating, say, a name with it.

20. Given this, Wittgenstein's remark that 'a picture is a fact' (2.141) is rather puzzling. It is fairly straightforward that the picture-sign containing the elements with which the objects are correlated is a fact; it is a structure of these elements. But a picture is not simply this physical thing, but includes correlations as well. The explanation is perhaps that Wittgenstein is speaking loosely here, and means by 'picture', the picture-sign. Evidence to support this is that in a parallel discussion of propositions, he says that a 'propositional <u>sign</u> is a fact' (3.14(2) - my underlining), and a propositional sign, as will be seen is what corresponds to the picture-sign.

21. Wittgenstein explicitly divorces his account of language from a psychological account:

> 4.1121 Psychology is no more closely related to philosophy than any other natural science.
>
> Theory of knowledge is the philosophy of psychology.
>
> Does not my study of sign-language correspond to the study of thought-processes, which philosophers used to consider so essential to the philosophy of logic? Only in most cases they got entangled in unessential psychological investigations, and with my method too there is an analogous risk.

22. Given that the pictorial form is <u>meant to be</u> both the possibility of the picture and the possibility of the fact pictured, Ramsey's objection (see <u>The Foundation of Mathematics</u>, p. 272) that the definitions given of pictoria form in 2.15 and 2.151 are inconsistent, would evaporate. Further, Ramsey again to the contrary (see <u>Ibid</u>.), I think that it is understood, when Wittgenstein describes the structure of a picture as the 'connexion of its elements'(2.15), that it is the connection of its elements <u>with each other</u>, rather than with something(s) outside the picture.

23. We might say that the reproduction of the material forms of the fact is necessary, but not sufficient, for structure-reflection in the sign. It is necessary, because, e.g. if we are going to reflect the color-structure of a fact, then the picture-sign must be colored. But it is not sufficient, because in addition - for this structure-reflection - we must have red in the picture-sign where there is, correspondingly, red in the fact, green in the one for green in the other, and so on.

24. Wittgenstein does mention a third sort of form, representational form, in 2.173 and 2.174. I think that this is the same as the material form(s), although I can do no more than speculate about this.

25. It is to be stressed that it is not said that <u>what is shown</u> exists. This would involve a category mistake, for, what is shown is the form of the fact pictured, and the form of the fact is not something which can exist or fail to exist (see <u>supra</u>., p.21). What is said is that something <u>specified by</u> what is shown exists.

26. 2.201, i.e.

> A picture depicts reality by representing a possibility of existence and non-existence of states of affairs.,

is an exception to this. Here 'representing' cannot be synonymous with 'saying', because a possibility is a form, and form, as we have seen, cannot be said, but is shown.

27. It is important for Wittgenstein that his picture-propositions can be either true, <u>or false</u> - see 2.21, 2.22, 2.222, 2.223. His idea of picturing permits this, for his pictures are not like snapshots, which require the existence of the situation pictured, but more like models, which require that we have, not the existing situation, but the idea, or form, or possibility of the situation to be pictured.

28. Wittgenstein explains his concept of truth with 4.063, the first two paragraphs of which read:

> An analogy to illustrate the concept of truth: imagine a black spot on white paper: you can describe the shape of the spot by saying, for each point of the sheet, whether it is black or white. To the fact that a point is black there corresponds a positive fact, and to the fact that a point is white (not black), a negative fact. If I designated a point on the sheet (a truth-value according to Frege), then this corresponds to the supposition that is put forward for judgement, etc. etc.
>
> But in order to be able to say that a point is black or white, I must first know when a point is called black, and when white: in order to be able to say, '"p" is true (or false)', I must have determined in what circumstances I call 'p' true, and so doing I determine the sense of the proposition.

(For the meaning of 'negative fact', see 2.06: 'We also call the existence of states of affairs a positive fact, and their non-existence a negative fact.') There is an analogy between calling a point on a piece of paper 'black' (or 'white'), and calling a proposition 'true' (or 'false'), in that we must know the meaning of 'black', on the one hand, and 'true', on the other. But this analogy turns into a disanalogy, insofar as knowing the meaning of 'true' is dependent upon knowing the sense of the proposition which we call 'true', where knowing the meaning of 'black' is not dependent upon knowing which point it is we are calling 'black' - although, of course, we must still know both in order to say 'This point is black'. Wittgenstein elaborates the disanalogy in the third paragraph:

> Now the point where the simile breaks down is this: we can indicate a point on the paper even if we do not know what black and white are, but if a proposition has no sense, nothing corresponds to it, since it does not designate a thing (a truth-value) which might have properties called 'false' or 'true'. The verb of a proposition is not 'is true' or 'is false', as Frege thought: rather, that which 'is true' must already contain the verb.

The other side of dependence of the meaning of 'truth' upon the sense of the proposition we are calling true, is a dependence of the sense of this proposition upon what we regard as the meaning of 'true' in this case. A proposition is thus unlike the point, in that the point is still something there even if we do not know what 'black' means, while the proposition is nothing for us if we do not know what counts as its truth. Thus, the point of the passage is that the concept of truth and the sense of propositions to which we ascribe truth are interdependent in a way in which an ordinary subject and predicate are not.

29. Wittgenstein is not saying here that a proposition is exactly like a picture whose sign provides structure-reflection - here a spatial picture picturing a spatial fact. He does not say, in 3.1431, that 'spatial arrangement' will express 'spatial sense', but just 'sense'; he is using this example to show that a proposition must have some structure, no matter what material form the structure takes, no matter what we use to provide the structure.

30. As I have already noted (see supra., p.34), the absence of an explicit acknowledgement of conventions in the pictures may result from a mistaken assumption that this can be taken care of by the structure-reflection aspect of the picture-sign. I have already shown that where such reflection is only partial, conventions are needed. I can now show that even where such reflection is complete, conventions for understanding are still needed. The reason is as follows: We have just seen (supra., p. 45) that anything with a structure can be used as the sign for a proposition, and it can - and usually will - be a sign which will not structurally reflect the fact pictured by the proposition. Now, suppose that we have a sign A' which is a perfect structure-reflection of A, and which consists of the elements x' and y' correlated with x and y in A. Being given two of the picture's component

the sign and the correlations - but not the third, conventions - can we understand the picture as a picture of A? The answer is no, because there is no reason why x and y cannot form facts other than A, facts which may be only imperfectly reflected in the structure of A', or even not at all. And the similarity between A and A' notwithstanding - the picture incorporating A' might just as well be a picture of one of these other facts as a picture of A. If the picture is to be a picture of A, then minimally it must be established by convention that the structure-reflection aspect of A' is relevant in this case, or simply that A' is being used in a picture of A.

To give an illustration, x and y might be two spatial objects simpliciter - which would be legitimate elements of a picture. Now, there are many different spatial configurations possible with x and y: x might be to the left or y, or vice versa; x might be above y, or vice versa; and so on. And suppose that in A', x' is above y'. Now this might show x above y - call this "A" - and then again it might not. For there is no reason why A' could not be the sign for a proposition showing one of the other configurations of x and y. And if A' is to be part of a picture of A, then it must be established to be so by convention. Without such conventions, there is no ground for understanding the picture containing A' in any particular way at all, and hence it is not really a picture - it shows nothing.

31. This last sentence might better be translated, 'An expression characterizes or marks a form and a content.' This is the 'content' of 3.13(5), i.e. the part of the sense which is not contained by the proposition; and since a sense is just the form plus this content, this sentence is just a reiteration of 3.31(1).

32. To say a bit more about the sign-symbol relationship: a symbol seems to stand to its associate sign as a word, say, stands to the sign with which it is associated. That is, it includes the sign, but is more than merely the sign:

> 3.32 A sign is what can be perceived of a symbol.

Moreover, just as synonymous words are still different words, so differing signs which have the same use will nevertheless be different symbols. This is certainly indicated by:

> 3.341(2) And similarly, in general, what is essential in a symbol is what all symbols that can serve the same purpose have in common.
>
> 3.344 What signifies in a symbol is what is common to all the symbols that the rules of logical syntax allow us to substitute for it.

I.e., since different symbols can serve the same purpose, they must have the same use, so what makes them different must be difference in sign. Finally, as with homonyms, the same sign with differing uses will count as different symbols - cf. 3.323, 3.324, 3.325.

33. From almost the beginning of his discussion of symbols, it is clear that Wittgenstein is interested not only in the particular, but also in the more general symbols, corresponding to more general forms, as a particular proposition will correspond to a particular form.

> 3.311 An expression presupposes the forms of all the propositions in which it can occur. It is the common characteristic mark of a class of propositions.

And as the sign for a particular symbol, which is given just one definite use, might be regarded as a constant, so the sign for a more general symbol, which stands for an indefinite number of similar but distinct uses might be regarded as a variable.

> 3.312 It is therefore presented by means of the general form of the propositions that it characterizes.
>
> In fact, in this form the expression will be constant and everything else variable.
>
> 3.313 Thus an expression is presented by means of a variable whose values are the propositions that contain the expression.
>
> (In the limiting case the variable becomes a constant, the expression becomes a proposition.)
>
> I call such a variable a 'propositional variable'.

While particular symbols not only correspond to a form but say something concerning the form - are, or are parts of, propositions - it is not clear that the more general expressions say as well as correspond to - show - forms (hence 3.313(2)); hence it is not clear that the more general symbols are actually propositions in their own right. At least some of them may be, however, being general propositions. For, Wittgenstein does seem to make allowance for general propositions - see discussion of 'prototype-description' infra., chapt. 2, sect. I, c and especially note 47.

34. Indeed, while Wittgenstein may discuss symbols at the propositional level, he is also very interested in them at the level of names, the elements of the proposition, what might be (and in fact are called by Wittgenstein) 'words'.

> 4.025 When translating one language into another, we do not proceed by translating each proposition of the one into a proposition of the other, but merely by translating the constituents of propositions.
> .....
> 4.026 The meanings of simple signs (words) must be explained to us if we are to understand them.
>
> With propositions, however, we make ourselves understood.

> 4.027 It belongs to the essence of a proposition that it should be able to communicate a <u>new</u> sense to us.
>
> 4.03 A proposition must be able to use old expressions to communicate a <u>new</u> sense to us.
> .....

The point in this interest in words is that when it comes to establishing symbols in language, with conventions, it is incalculably more efficient to do it word by word, since for any number of words, the number of possible combinations of these words in propositions will be many, many times that number. In giving the conventions for the word symbols, of course, we will <u>ipso facto</u> have the conventions for the propositional symbols, just as we do in ordinary language. Once we know how to use word-signs, then we do not need to be taught how to use propositional signs. For the sake of simplicity, however, I shall ignore this primacy of words over propositions when I move to the discussion of the conventions establishing the symbols.

35. Wittgenstein seems to hold that these rules of syntax encompass rules of translation, that is, inter-language definitions.

> 3.343 Definitions are rules for translating from one language into another. Any correct sign-language must be translatable into any other in accordance with such rules: it is this that they have in common.
>
> 3.344 What signifies in a symbol is what is common to all the symbols that the rules of logical syntax allow us to substitute for it.

Translation from one language to another consists, presumably, in substituting synonymous symbols for each other. And substitution of synonymous symbols for each other is governed by the rules of logical syntax. This is reasonable, since if the rules of syntax determine the use of a sign within a language, then by comparing the rules of syntax of two languages we will be able to tell which respective signs in the two languages have the same use, thus forming synonymous symbols.

Two things might be said in elaboration of the idea of synonyms. First, it is doubtful that Wittgenstein would - or could - allow synonyms within a given language. For the presence of different signs performing the same function seems to be Wittgenstein's only criterion for saying that we have more than one language. Second, given Wittgenstein's idea of use, and given that synonymy requires sameness of use, it may not be quite right to say that a word-expression in one language is synonymous with a word-expression in another language. For, his idea of use of a symbol is the other symbol with which it can be combined. And, thus, any given word in one language will not have the same use as any word in any other language. The reason is that between two differing languages there will be no - or few - symbols in common since, whatever the analogy between the uses, there will be differences of sign, and differing signs mean differing symbols. The result is that any

given word in one language will not combine with the same symbols - within the language - as any word within any other language; hence, the difference of use. And, if two symbols do not have the same use they will not be synonymous. Therfore, it looks as though, strictly speaking, we will not have synonymy between languages - however analogous the uses.

36. Wittgenstein sometimes even speaks of the thought as the proposition itself:

> 3 A logical picture of facts is a thought.
>
> 4 A thought is a proposition with a sense.

And, consonant with this there is talk that thoughts can be, like propositions, either true or false (3.04 and 3.05) - although this is not in itself decisive evidence that thoughts are equivalent to propositions, rather than to sense, for it is not clear that 'sense' mightn't have been used in the same context. Further, the force of 3 plus 4 in equating thought and proposition might be discounted for two reasons. First, the pair of passages looks as though it was set up primarily for the rhetorical elegance of yielding the result: 'A logical picture of facts is a proposition with a sense' - one of the major themes of the Tractatus. Second, the passage just preceding 4, 3.5, reads:

> A propositional sign, applied and thought out, is a thought.

This, while in a sense it just says the same thing as 3 and 4, yet suggests that a thought, like sense, is something that results when a sign is made into a proposition, but is not necessarily to be identified with the proposition, which, after all, includes the sign as well as the sense. I shall therefore take thought as equivalent to sense rather than to proposition.

37. In the foregoing, I have spoken of our 'knowing' the forms a priori. This may not be correct - strictly speaking - if what can be known is identical with what can be said, as is what can be thought. Since forms cannot be said, but are shown, it would follow, then, that forms cannot be known. We could still say, however, that forms cannot be learned from experience - from looking at what is in the world - and so they would be a priori in this sense.

38. I will gloss over the difficulty that, since a picture-proposition is more than the logical product of elementary propositions it really is not expressed by such a logical product, or indication of truth-conditions. That is to say, while the logical product expresses part of the picture-proposition, the latter cannot be reduced to the former. Wittgenstein glosses over this difficulty as well (see, e.g., 4.431, 4.442).

39. 'Truth-conditions' of a given proposition usually refers to that for which the proposition is true, but, in Wittgenstein's sense of the term, it covers both that for which the proposition is true and that for which the proposition is false (4.41 is an exception to this). To do the work usually

done by 'truth-conditions' he employs another term, 'truth-grounds', which stands for that for which the proposition is true (see 5.101(2)).

40. Wittgenstein provides for this schematic expression of a proposition as truth-function. For the schematization of the truth-possibilities of elementary propositions, see 4.31. For the making of this into the expression for a truth-function, by correlating truth-values of the truth-function with the truth-possibilities of elementary propositions to indicate truth-conditions, see 4.43 and 4.44.

41. The truth-functional expression is an expression of proposition 'r', and deals with the truth-relations of proposition 'r'. But a proposition does not say anything about its own truth-relations; this would have to be done in another proposition about proposition 'r' (see 4.442(2)). At best proposition 'r' shows something about its truth-relations by the criteria for its correct use - e.g. by being maintainable in conjunction with the maintenance of its truth-grounds, and by being unmaintainable in conjunction with the assertion of conditions of its falsity. Thus, as an expression of proposition 'r', the truth-functional schema shows what it indicates of the truth-relations of 'r'.

42. Wittgenstein indicates that the truth-functional expression, the schema, says something, insofar as he calls the sign for it a 'propositional sign' (4.44, 4.442), and, indeed, identifies the expression itself with a proposition (4.431). But he is of no explicit help in specifying what the expression says, and how it says it. And he cannot rest on the assumption that this expression works just as does a picture. For, while a picture-proposition can be expressed truth-functionally, it will not then say what it says when expressed as a picture. And, then, not all truth-functions will have a pictorial expression as well as a truth-functional one.

43. Wittgenstein is concerned to stress - as his 'fundamental idea' (4.0312) that, having this role, the symbols for operations are nothing at all like names. They do not stand for something; rather they indicate operations on propositions. (See 4.0312, 5.4 - 5.441, 5.4611.)

44. As in the case of the pictorial notation for propositions, Wittgenstein is clear that rules are involved in the establishment of the notation (see 5.512, 5.514). But, again, he is very unclear about just what these rules are and how they work.

45. The one operation to which Wittgenstein reduces all the other operations is a more general form of operation 15 (with reference to schema B) which produces 'o'. It is more general because it will operate upon any number of propositions, while operation 15 will only operate upon two. This operation, like 15, produces truth-functions by associating the truth of the truth-function with the joint falsity of all of the propositions upon which it operates. Wittgenstein calls this the 'negation' operation; it is not to be confused with ordinary negation ('-'), although it coincides with ordinary negation when it is operating upon only one proposition; the negation operation is the joint negation of all the propositions upon which

it is operating. The negation operation is generally noted 'N(E)' - where 'N' stands for the operation, and the 'E' for the set of propositions upon which the N is operating. Examples of the expression of our truth-functions in terms of this one operation are (in the order in which the operation is applied, successively):

'o' = 'N(p,q)',
'b' = 'N(N(p,q))',
'a' = 'N(N(p,q), N(N(p,q)))',
's' = 'N(N(N(p,q), N(N(p,q))))'.

(For Wittgenstein's development of this, see 5.1311 and 5.5 - 5.51.)

46. Since all operators can be reduced to one, the number of operations in terms of which we express the truth-functions - in operational notation - is arbitrary, as are the signs which we use for any of them (see supra., p. 48) This seems to be the import of the passages,

> 5.474 The number of fundamental operations that are necessary depends solely on our notation.
>
> 5.476 It is clear that this is not a question of a number of primitive ideas that have to be signified, but rather of the expression of a rule.

47. There apparently are propositions which consist of nothing more than prototype-descriptions, and these are of the form (Ex)Fx or (x)Fx; these are inherently general. In these cases, the prototype-description seems to provide all the sense that there is in the proposition. This sort of proposition seems to receive mention in 5.521 - 5.526, esp.

> 5.526 We can describe the world completely by means of fully generalized propositions, i.e. without first correlating any name with a particular object.
>
> Then, in order to arrive at the customary mode of expression, we simply need to add, after an expression like, 'There is one and only one x such that...', the words, 'and that x is a'.

48. I am not certain that this discussion of 'prototype' - as a sort of general description - fits the use of 'prototype' in 3.315, where Wittgenstein equates a logical prototype with a logical form. It would not be difficult to argue that the idea of 'prototype' which I have developed is not unlike that of a logical form - e.g. it is shown rather than said. However, I am not sure that the equation of prototype and form is all that Wittgenstein is after in 3.315, for the context appears to impart more than just this about the prototype, although I must confess that I have great difficulty in understand what more this may be. I will therefore refrain from drawing conclusions as to whether this is consistent with my discussion of prototype, given on the basis of other passages in the Tractatus and Notebooks.

49. It might be thought that 3.24(2) would enable us to avoid this conclusion but this would be wrong. The force of 3.24(2) is to get us out of having to have any given particular existent for the sake of sense - which it does by allowing that we can express the proposition in question as a truth-function. But it does not get us out of having to have any existent at all for the sake of sense. For, the truth-functional expression of a propositio requires the existence of some things stood for by some words. A truth-function requires this because it is the expression of truth-conditions in terms of the truth-possibilities of elementary propositions (see supra., chapt. 1, p.58). These elementary propositions must be formulated if we are to have our truth-functional expression, and this means that we must have names meaning objects, which is to say, we must have the existence (or subsistence) of objects.

50. Because both arguments finally involve the position of premise 3, it is easy to conflate the two. I think that Griffin does this in his rendition of the argument given in the passages 2.021 - 2.02.2, especially where he says:

> .....The first proposition in the analysis specifies what I mean by 'the broom'. In order for me to be talking about anything at all, this proposition must be true. In other words, in general, the proposition that must be true in order for another to have sense is the proposition which by specifying the application of the description, gives it a sense. But now we get into a regress, because the same indeterminateness holds for the descriptions I used in the proposition which gives the sense of the first description. What do I refer to in the world when I here speak of 'the brush' and 'the stick'? Unless we eventually reach names, the regress is infinite. The sense of a proposition will never be specified. (WLA., p.67).

If it is the alternative argument that is in question, then it is not because of indeterminateness (or to enable us to make a definite reference) that we must have this regress of analysis to objects, but because at each stage of analysis sense depends upon the truth of further propositions. Again, with respect to argument A now, it is not because we need to be free of the dependence of sense on the truth of further propositions that we must have the regress of analysis to objects, but because achieving a definite reference requires expression in terms of objects.

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