Chapter Three

SEMANTIC RULES

Introduction

Chapter two contained an argument to show that in order to avoid begging questions we must look for the sharpest possible criteria for identity of meanings, and it was suggested that only by taking note of the universals (i.e. observable properties and relations) to which words are intended to refer could we find sufficiently sharp criteria. (See 2.C.) The way had been prepared for this in section 2.B., where it was shown how conceptual schemes were important in connection with identification of meanings, and how our own conceptual scheme had provision for a distinction between material objects and the universals which they instantiate. Section 2.D contained arguments to show that talk about universals can explain since their existence is a fact about the world, independent of the existence of instances or of our use of language. In this chapter an attempt will be made to show in more detail how properties may be used to give descriptive words their meanings, and how we may compare and distinguish meanings by examining the ways in which words refer to properties. This will provide many interesting examples to which the analytic-synthetic distinction may be applied later on.

The programme for the chapter will be roughly as follows. First of all the simplest type of correlation between words and properties will be discussed, and then it will be shown how more complicated correlations are possible, firstly by means of logical syntheses of concepts and secondly by means of non-logical syntheses.

NOTE: This is part of A.Sloman's 1962 Oxford DPhil Thesis "Knowing and Understanding"

Further information, contents, and other chapters are freely available at: http://goo.gl/9UNH81

Note (24/06/2016): When this chapter was written I knew nothing about programming and Artificial Intelligence. In retrospect, much of the discussion of procedures for applying concepts is directly relevant to the problems of designing human-like intelligent machines.
This will help to justify my claim that universals explain our use of descriptive words.

There will be many oversimplifications in this chapter, since it ignores the fact that words are ordinarily used with relatively indefinite meanings, but it is hoped that this will be compensated for by the discussion in chapter four. In addition, this chapter will be concerned only to show how we decide whether or not a particular object is describable by some word. In order to explain how descriptive words can contribute to the meanings of whole sentences, we must wait for the discussion of logical words and constructions in chapter five. Finally, notice that although the discussion is restricted to words which refer to properties, nevertheless similar remarks could be made about words referring to observable relations.

3.A. F-words
3.A.1. The simplest sort of semantic rule, though by no means the only sort, is one which correlates a descriptive word with only one property, which must be possessed by objects correctly describable by that word. I describe this sort of word as an “f-word” (or feature-word), and shall say that it is governed by an f-rule. Such words describe objects in virtue of something which they have in common, some respect in which they are all alike. If, for example, the word “scarlet” refers to a specific shade of colour, then we may say that it is an f-word, and all the things which it describes, since they have exactly the same shade of colour, are alike in some respect.
The word “red”, as used by normal persons, also refers to one property, not a shade, but a hue, which may be common to objects of different shades. When we look at the white light spectrum (or a rainbow), we see a continuous range of continuously varying shades of colour. Yet despite this continuity, the spectrum is divided into fairly definite bands, each containing a range of specific shades which are different from one another, yet have something in common. All the shades in the red band, for example, have something in common which they do not share with shades in the orange band, or the yellow band, despite the possibility that shades of red and shades of orange may resemble one another closely, if they are near the red-orange boundary.

Hampshire wrote, in “Thought and Action”, on p.35: “there are a definite number of discriminable shades, to each one of which a definite name can be allotted”. He must surely have meant hues rather than specific shades, for there seem to be indefinitely many different specific shades. Nevertheless his remarks illustrate what I mean by an f-word. I shall ignore for the time being, the fact that the boundaries between bands may be more or less indeterminate, and the fact that different persons may see their bands in different places. (Contrast what I have said with Wittgenstein’s remarks, in the “Blue and Brown Books”, p.133-5.)

3.A.2. Just as normal persons can learn to see the hue common to objects with different shades of red, and associate it with the word “red”, so can most normal persons learn to perceive the property common to objects
which are all triangular, even though they have different specific triangular shapes. Such persons may adopt an f-rule, correlating the word “triangular” with that common property. In addition, each of the many different specific triangular shapes may be memorized and correlated with a descriptive word by an f-rule. (E.g., the shape of an equilateral triangle, or a triangle whose sides meet at angles of 90°, 60° and 30°.)

It should be noticed that I am not talking about so-called “perfect” triangles. I am talking about shapes which we can all recognize and which a child can learn to distinguish long before it learns to prove geometrical theorems or talk about “perfectly” straight lines. We all know how to distinguish triangular pieces of cardboard, or diagrams, from round or square ones, for example. In chapter seven something will be said about “perfect” geometrical concepts and other idealized concepts, such as the concept of a perfectly specific shade of colour. But this chapter is not concerned with such things.

3.A.3. The examples “triangle” and “red”, illustrate an ambiguity in talking about a word which is correlated with just one property. This does not mean that there may not be a whole range of different properties which correspond to the word. For example, there are very many different shades of red which may be possessed by red objects, and different triangular shapes which may be possessed by triangles. Nevertheless, in each case, if the word is an f-word, than there is only one property in virtue of which all those objects are correctly describable by it. (Cf. 3.C.5.)
Neither do I wish to rule out the possibility that there may be other less specific properties common to all the objects described by an f-word. For example, even if the word “triangular” refers to only one property, there are nevertheless several other properties common to all objects which it describes. For example, all are bounded by straight lines, may be inscribed in circles, and have no reflex angles. These properties may be possessed by other objects too, such as square or hexagonal objects. But there are other properties common only to triangles, such as the property of being rectilinear and having angles which add up to a straight line.

3.A.4. It may be objected that there is not just one feature or property associated with the word “triangular” since a definition can be given in terms of simpler notions. But anyone who talks about the possibility of analysing such a concept in terms of simpler ones, or about criteria for telling whether an object has the property or not, must at least admit that at some stage we simply have to recognize something, be it a criterion or one of the “simpler” properties. Then a word could be correlated with that “something” by means of an f-rule and would illustrate what I am talking about. However, since triangularity is a feature which most of us can perceive and take in at a glance, why not allow that the word “triangular” can be used as an f-word, if there are f-words at all? I do not wish to settle this here. (One person may regard some property simple or unanalyzable, while another regards it as built out of simpler properties. Are there two properties, or only one? Cf. “tetrahedral” example in 2.C.8.)
3.A.5. F-words need not describe only continuously existing material objects. A sound which starts, lasts a few minutes, then stops is a particular, and may be described as a sort of physical object with physical properties. It can be located in time, and sometimes in space too. It may be a sound of a definite pitch, and this property may be shared with other sounds. Or it may have a definite timbre, such as the tone of a flute, or clarinet, or electronic organ, and share this property with other sounds quite different in pitch. It may be the sound of a major chord, and share this property with other sounds in different keys, or with different dynamic distributions (e.g. the tonic may be louder than the dominant in one, but not the other). Each of these properties common to different sounds can be memorized, associated with a descriptive f-word, and recognized again later on.

A sound may also change. If it changes in pitch, then the pattern of changes may be recognizable, and we can speak of a “tune”, and other sounds may have the same tune. Some persons may be able to memorize the sound of a whole symphony, and associate that property with an f-word. Less fortunate beings can merely recognize parts of symphonies, or the styles in which they are written, such as Beethoven’s style, or Hindemith’s. These are properties of enduring objects or events, and have to be perceived during an interval of time. But they may all be correlated with descriptive f-words, by means of f-rules.

3.A.6. The important thing about all the examples is that they involve properties which can be perceived by
means of the senses, memorized, and recognized in new instances. A property which is not observable by means of the senses, such as the property of being magnetized, or of having a certain electrical resistivity, cannot be correlated thus with a descriptive word and provide a rational explanation of our use of the word. Words may, of course, refer to such “inferred” properties (e.g. “dispositional” properties), but not in the same way. (There may be some intermediate cases.)

3.A.7. These observable properties are the basic entities out of which the meanings of many kinds of descriptive words are constructed. I have so far described only the very simplest kind of descriptive word, governed by the very simplest kind of semantic rule, namely a rule which correlates one property with one word.

It is commonly denied that descriptive words correspond to single entities which are their meanings, or account for their having meanings (see, for example, remarks in 2.D.6 and 7, etc., to the effect that the “one-one” model will not do). Unfortunately, this denial is usually much too vague to be of use to anyone. By showing that there are other kinds of descriptive words than f-words, and why they fail to fit the “one-one” model, I shall be describing one clear sense in which the denial is justified, though relatively trivial. But it is important to distinguish the thesis that the one-one model is inadequate to account for most of our descriptive words from the thesis that descriptive words do not refer to properties or other universals which can explain their use. It is very easy to confuse these theses. (I think Wittgenstein’s discussion of the notion of “following a rule” in “Philosophical Investigations”
was intended to support something like the latter thesis. I shall not explicitly argue against him, but my account can be construed as an attempt to show that an alternative picture can be coherently constructed.)

The time has now come to turn to more complicated types of semantic correlations.

3.B. Logical syntheses

3.B.1. Some one-one correlations between descriptive words and properties have been described, and now we must see how more complicated correlations are possible if new semantic correlations are constructed out of the simplest ones. Three methods of construction will be described in this section, namely disjunction, conjunction and negation. These correspond to the use of the logical connectives “or”, “and” and “not” in explicit definitions. They may be thought of not only as propositional connectives, but also as meaning-functions, which take words as arguments and yield expressions whose meanings are simple functions of the meanings of the arguments. I shall simply assume that we understand these logical words, and will not try to explain how they work. (See chapter five.)

The construction of new semantic correlations of the sorts about to be described may be called a process of “logical synthesis”. Later, we shall contrast it with processes of “non-logical synthesis”.

3.B.2. D-words

The first sort of rule which does not fit the simple one-one model is a semantic rule which correlates a word with more than one property, disjunctively. I shall call
such a rule a \textit{d-rule}, and the word it governs a \textit{d-word}. For example, the word “ored” may be correlated with the two hues, red and orange, so that the word describes an object if and only if it has one or other of these two properties. If the words “red” and “orange” are \textit{f-words} which refer to these two properties, then the word “ored” means the same as “red or orange”.

A more interesting kind of disjunctive rule is one which correlates a word with a whole \textit{range} of properties, such as a range of specific shades of colour. The word “red” may be used as a \textit{d-word} of this sort, instead of as an \textit{f-word}. For there may be persons who can see and discriminate and memorize specific shades of colour, though quite unable to see hues in the way in which most normal persons can, as described in 3.A.1, above. Such a person will see the spectrum as a single band of continuously varying shades of colour, much as we see one of the bands of the spectrum. This hue-blind (but not colour-blind) person will not see the spectrum divided up into different bands, so he cannot learn to use the word “red” in the normal way. If presented with pieces of coloured paper all of different shades, and instructed to arrange them in groups with a common feature, he will be unable to do so, even if there are several red pieces, several yellow pieces, and so on. To him they all simply look different. (They look different to normal persons too, but they also have respects of similarity, which is why we can group them.) Though unable to learn to use the word “red” in the normal way, such a hue-blind person may learn to use it as a \textit{d-word}, by memorizing all the different shades in the spectrum which lie in the red band, and then describing an object as “red” if and only if it has one of the specific shades of colour which he
has learnt to associate with the word. Similarly, a person who is not hue-blind, but sees the spectrum divided up differently from the way we do (his “hues” are different because he sees bands in different places) may learn to use our word “red” as a d-word, by memorizing specific shades of colour. All we require of such persons is that they agree with normal persons as to whether objects are exactly the same shade of colour or not.

3.B.2.a. In the same way, there may be a person who is unable to see anything common to all those shapes which are triangular, although he can see and discriminate specific shapes and tell, for example, whether two objects are both equilaterally triangular, or not. Perhaps he is unable to count up to three - but the explanation of his inability to perceive triangularity need not concern us. Such a person cannot use the words “triangle”, “quadrilateral”, etc., as f-words, for he cannot see any common property with which they may be correlated. But if he can see and memorize specific triangular shapes, such as the shape of a right-angled isosceles triangle, and distinguish them from other specific shapes, such as the shape of a square or a regular pentagon, then he can memorize a whole range of specific triangular shapes and adopt a d-rule correlating them with the word “triangular”. He then uses the word to describe objects if and only if they have one of the many shapes which he has memorized, as in the case of “ored” or the d-word “red”. (As before, I am not talking about “perfect” mathematical, shapes, but shapes which we can all learn to recognize and discriminate with greater and lesser degrees of accuracy.)
Of course, these examples are highly artificial, since there are indefinitely many different specific shades of red, and indefinitely many specific triangular shapes and nobody could memorize them all. But the essential point could as well be illustrated by a person who merely memorized very many different shades of red, or triangular shapes, enough to get by with in most ordinary circumstances. (Later, a procedure for picking out a whole range of properties without memorizing them all will be described.) Notice that a person who memorizes a set of properties and correlates them with a word need not have a name for each of them. His d-word need not, therefore, be definable in his vocabulary.

3.B.3. C-words

The next type of semantic rule is one which correlates a word with a combination of properties. This is a c-word, and refers to a set of properties conjunctively. For example, the word “glen” might be defined so as to refer to the combination of the hue, green, and the surface-property, glossiness. It would then describe objects which possessed both of these properties, and would be synonymous with the expression “green and glossy”. (As before, someone might learn to use a c-word to refer to a combination of properties without being taught names for those different properties. Then, in his vocabulary, the word would be indefinable, despite the possibility of defining it in a richer vocabulary.)

We may think of such c-rules, like d-rules, as being logically constructed out of f-rules, just as we can think of the meanings of c-words and d-words as logically constructed out of the meanings of f-words (although, of
course, the language in which they are used need not include the required f-words, for the reason just stated).

We need not restrict the notion to combinations of only two properties. A word might describe a sequence of sounds if and only if it possessed the three properties of being in the key of E-major, of being the sound of a piano, and of being in the style of Beethoven. This would then be a c-word referring conjunctively to three properties.


Semantic correlations involving negation can be very confusing as there are several different ways in which negation may come in, and it is important to be clear about them.

I shall describe a strong n-rule as a rule which correlates a word “W” with a property P negatively, as follows: the word “W” does not describe an object if that object has the property P. In such a case, the possession of the property is a sufficient condition for not being describable by the word, and the absence of the property is a necessary condition for being describable. Whether it is also a sufficient condition, will depend on the other rules, if any with which the n-rule is conjoined. Thus, the expression “scalene-triangle” is correlated negatively with the property of symmetry, and requires the absence of that property in objects which it describes. But the absence of the property is not sufficient, for in addition the object must be triangular. Usually there are other rules and absence of the negatively correlated property is not sufficient to ensure describability.
3.B.4.a. These “strong” n-rules, specify inapplicability-conditions for words. They are to be distinguished from “weak” n-rules, which merely limit the applicability-conditions of words, thereby helping to make the meanings of indefinite words more definite. The difference may be illustrated by means of an example.

I have hitherto ignored doubts which may arise over the possession or non-possession of a property by an object, but it is sometimes difficult to decide whether an object possesses some property or not, where this is not an empirical difficulty arising out of the difficulty of seeing the object clearly or the difficulty of remembering what the property looked like. I may have plenty of red objects around to remind me of the hue associated with the word “red” (an f-word) and be able to see an object quite clearly in a good light, and yet be undecided as to whether it has the same hue as the other red objects or not. In this case I am undecided about the redness of the object, though I may be able to see its specific shade quite clearly and recognize it again in other objects. We may say that the word “red” refers to an indefinite property, and that its extension has an indefinite boundary. (Many more kinds of indeterminateness will be described in chapter four.)

In such a case, the indefiniteness may be eliminated, or at least reduced, by the adoption of an additional rule. Suppose we call the difficult shade of colour, of the doubtful object, “redange” (if it is on the red-orange boundary). Then we may decide to adopt an additional rule correlating the word “red” with the shade redange positively, or an n-rule correlating it negatively. In either case the decision would make the word more definite. In the former case, we should have a new
word “RED”, say, governed by a disjunctive rule: it describes objects if they definitely have the hue redness, or if they have the specific shade, redange. In the latter case we should have a new word “RED” which does not refer to the shade redange, and means, roughly, “red and not redange”.

Now, however, there is an important ambiguity to be noticed. Does this new n-rule specify that not being redange is a necessary condition for being RED, or does it merely specify that being redange is not a sufficient condition for being RED? In the former case, the n-rule is a strong one, in the latter case we have a weak n-rule.

3.B.4.b. The weak n-rule, unlike the strong one, leaves open the question whether objects which are redange in colour may not have some other feature in virtue of which they are RED. That is, the strong rule takes “not-redange” to be part of the meaning of “RED”, while the weak n-rule merely specifies that “redange” is not part of the meaning of “RED”. Something else may make it impossible for any object which is redange also to be RED, such as the impossibility of its having some other specific shade of colour which is definitely a shade of red. But the impossibility does not have its origin solely in the weak n-rule. Indeed, the weak rule leaves open the possibility that the word “RED” is conjunctively correlated with the property of being glossy, in which case a glossy and redange object would definitely be RED, despite the weak negative correlation between “RED” and the shade, redange.

The weak rule specifies a sort of irrelevance condition: being redange is irrelevant to being RED, and
other factors must settle the matter. If there are definitely no other factors, then the object which is redange is definitely not to be described as “RED”: this is how even a weak n-rule may help to eliminate borderline cases and so reduce indefiniteness.

3.B.4.c. It might be thought that weak n-rules were always necessary to specify that words are neither incompatible nor stand in a relation of entailment, but this is not so. We can learn to correlate the word “red” with a recognizable hue, and the word “glossy” with a recognizable property of surfaces, without the need for any explicit rule to the effect that the property referred to by one of them is irrelevant to describability by the other. This is because we can tell whether an object is red, or glossy, without ever having to notice whether it has the other property or not. We can therefore learn to understand either word without having to be told anything about its connection with the property referred to by the other, since each refers to a property which is sufficiently definite without any rule correlating it with the other. The mere fact that a thing is glossy does not, on its own, raise the slightest doubt as to whether it is red or not, so there is no doubt to resolve by adopting an n-rule, even a weak one. Only where there is some kind of indefiniteness, as in the case of redange objects, can there be a point in adopting a weak n-rule (and even then there is a point only insofar as there is a point in removing the indefiniteness: see chapter four). This is another illustration of the remark made in 2.D.3. and 2.D.4 to the effect that “links between descriptive expressions” may be rendered
superfluous by semantic correlations between descriptive expressions and properties.

3.B.4.d. The importance of all this is that it shows that sometimes correlations between words and properties are enough to determine the uses of the words without the aid of additional correlations between words and words. This shows that when people argue that the incompatibility of determinates in the same range of determinables is due to linguistic rules which make descriptive expressions incompatible, then this must be defended by an argument to show that such rules are necessary. Perhaps correlations between words and properties can suffice to give the words the meanings they have, and the incompatibilities are due to something other than the rules which fix their meanings. What is more, even if weak n-rules are required, in order to remove certain kinds of indefiniteness, the argument shows that these n-rules do not on their own make descriptions incompatible: strong n-rules are needed for that. But philosophers who so blithely say that it is analytic that nothing can be red and yellow all over at the same time owing to linguistic rules which make the words “red” and “yellow” incompatible descriptions, are not usually even aware of the difference between weak and strong n-rules, and so do not notice that an argument in support of the need for weak n-rules does not establish that we need strong n-rules too. More will be said about this below. (All this helps to illustrate the application of sharp criteria for identifying and distinguishing meanings.)

3.B.4.e. It might be argued that there is no difference
between f-rules and strong n-rules since every f-rule correlating a word positively with a property is equivalent to a strong n-rule correlating that word negatively with the absence of that property. Thus, the f-word “red” would be correlated negatively with the property of not having the hue, red. This is irrelevant to our purposes, since the important thing is that given a word and a property with which it is correlated we must know whether it is positively correlated with the property if we are to know its meaning, and it doesn’t matter if we find out the answer by discovering whether the word is negatively correlated with the absence of the property. In any case, it is unreasonable to argue that in general there is a symmetry between the possession of a property and the non-possession of a property, since the perception and identification of, for example, redness, is quite different from the perception and identification of the “property” of not being red. For example, when I look at the surface of an object, I see one colour, but if the absence of a colour is also a perceptible property, then I perceive indefinitely many different properties of this sort in any one object. (There are, however, intermediate cases. For example, some rectilinear shapes are regular and some are irregular: which is the perceptible property and which the absence of a perceptible property, regularity or irregularity? It doesn’t matter.)

3.B.5. Reiterated constructions

It should not be thought that the logical operations of disjunction, conjunction and negation can be applied only to f-rules. For the process of constructing new
semantic rules out of old ones is a process which can be reiterated, like the process of constructing new propositions out of old ones, using truth-functional connectives. So not only f-rules can be disjoined, conjoined or negated, but also d-rules, c-rules and n-rules.

For example, if P, Q and R are three different properties, and S represents the range of properties (S₁, S₂,...), then a word may be governed by the following semantic rule: The word “W” describes an object correctly if and only if the object either has the property P and not the combination of properties Q and R, or it has the property R and not one of the properties in the range S, or it has the property Q and not the property P. The word therefore refers to the following complex property, which is logically synthesized out of simpler properties:

\[ P \& \neg(Q\&R) \lor R \& \neg((S_1\lor S_2\lor...) \lor Q \& \neg P) \]

There is clearly not just one property correlated with the word “W”. Nevertheless the correlation between the word and the observable properties mentioned serves to explain how the word means what it does: it determines the boundaries of the extension of the word. So we see that universals can explain even if the one-one model is rejected.

There is no need to say that there is one property to which such a word refers, or that there is any one thing common to all the objects which it describes, to be discovered by abstracting from their specific differences. What on earth could abstraction yield in the case of objects describable by a word like “W”? We may, if we wish, make it true by definition of “property” that
there is a property correlated with such a word, but then we should have to distinguish some properties (or universals) as “improper” properties,¹ as they are not perceptible objects of experience, but mere logical constructions out of other perceptible properties. (This should be clear even from a consideration of simple d-rules. One word may be disjunctively correlated with two or more properties which have absolutely nothing to do with one another. What point could there be in saying that this created a new property common to all the objects it describes? The point would be merely verbal.)

Another thing shown by this example, is that demonstrating that the possession of a property by an object is neither a necessary nor a sufficient condition for describability of that object by some word, does not establish that there is no definite semantic correlation between the word and the property. For neither possession of the property P, nor possession of S₂ is either a necessary or a sufficient condition for describability of an object by “W”. This is sometimes overlooked by philosophers who try to show that there is no logical connection between concepts by showing that there are neither necessary; nor sufficient connections. (Cf. “Goodness and Choice”, by Mrs Foot, in P.A.S.Supp. 1961. See also all the talk about necessary and sufficient conditions in Hart’s essay: “The Ascription of Responsibility and Rights” in L.I.L.I.)

3.B.6. We have seen how words may be correlated by means

of f-rules with single properties, and how repeated application of logical methods of construction may yield more and more complicated kinds of semantic correlations. When words whose meanings are synthesized in these ways occur in a proposition, then it is possible to analyse that proposition into a truth-functional complex constructed out of simpler propositions, in the manner of Wittgenstein’s “Tractatus”.

There are, however, more complicated kinds of logical synthesis than those mentioned so far, since quantifiers may be used too. For example, I might define a word to mean the same as the expression “as big as the biggest of the mammals”, and this would involve a sort of logical synthesis of a new descriptive word in terms of old ones, namely “mammal”, and “big”. Or, to take a slightly more complicated example, someone might use the word “lawnmower” as a synonym for “machine which has most of the properties common to things which can cut grass”. Here we have a complicated logical synthesis involving quantification over properties. A full discussion of such complicated cases would require us to go into the “Ramified theory of types” of “Principia Mathematica”, which would really be unnecessary for the main purposes of this essay.

In addition to these more complicated types of logical synthesis, there are also non-logical methods of synthesizing meanings of descriptive words, some of which will be discussed presently. But first we must see what light all of this sheds on my claim that talk about universals can explain our use of descriptive words.
3.C. How properties explain

3.C.1. The discussion of logically synthesized semantic rules in the previous section puts us in a position to see how talking about observable properties can account for our use of descriptive words. We have already noticed (in 3.B.5.) that it explains because the possession and non-possession of properties may determine whether objects are or are not describable by a word, and this is an explanation because, as pointed out in section 2.D, universals are independent entities, not essentially tied to their actual particular instances.

This is why pointing to an observable property common to a set of objects can explain why they are classified together or why the extension of a concept has the boundaries which it does have. As shown by the examples of the previous section, talk about universals can explain, even when correlations are not of the simple one-one type. In such cases, it is not the complex, logically synthesized “improper” property which explains, but the observable ones out of which it is synthesized, as will be shown also by the discussion of this section. (See 3.C.6, for example.)

3.C.2. In this section, I wish to try to show how talking about universals can provide explanations of the sort which were described in chapter one as “rational”, or “personal”, explanations of linguistic behaviour such as describing and classifying. By describing a person’s behaviour from his own point of view, we can explain what it would be like to be in his position (to act for his reasons) and this can remove certain kinds of puzzle-ment. (The description may also serve, partly, as a
causal explanation, from a slightly different point of view: explanations from different points of view may overlap to some extent.)

It should be noted that talking about observable properties can explain not only linguistic matters, but other things too, such as how one recognizes a person, for example by the sound of his voice, the shape of his head, the colour of his hair or some other feature or combination of features. It may explain one’s reaction to a work of art: “It is not so much because of the pattern of shapes that I like the painting, as because of the distribution of colours.” Similarly, mention of an observable property explains how a person recognizes an object as being of a certain kind, and the fact that he intends a word to refer to that property explains why he describes the object as he does.

Of course, we do not feel puzzled or curious concerning many familiar types of behaviour, since we know what it is like to produce that kind of behaviour. Hence we do not feel the need for explanations of the kind which I am talking about. But this is only because of the familiarity of the situations, which ensures that we already possess the necessary explanations. Talk about universals can make explicit the reasons for which we do not regard certain things as puzzling, as well as providing explanations which remove puzzlement.

3.C.3. We must now be more precise. Talk about properties can explain because we can have them in mind without having any of their instances in mind. We can perceive properties (they are tangible to the senses); we can pay attention to them or draw attention to them (“Look at the colour of her dress!”); we can bear them
in mind ("Think of the colour of our wall-paper when you choose the curtains"); we can think about them and imagine them in the absence of any instances ("Try to imagine a shape for a suitable frame for this picture"); we can memorize them and recognize them again in new instances, or in new contexts ("Look, that roof is the same shape as ours!" or "I’ll never forget the sound of his walk, I’ll always be able to recognize his approach by the sound of his footsteps").

All these are ways of having a property in mind, and it should be noted that this need not involve having any sort of "mental image" of the same sort as after-images. I can think of the way a tune goes without actually hearing it in my head, or remember what someone’s face looks like without actually having a visual image. Of course, in a sense I hear the tune or see the face “in my mind” (e.g. "in my mind’s eye"), but this may be quite different from, for example, seeing ghost pictures. In addition, one may be quite sure, and correctly so, that one can recognize a face or a tune or the sound of a word when one next meets it, even though one cannot at present remember how it goes. ("I’ve got his name on the tip of my tongue ...")

3.C.4. Since I can have a universal in mind, I can decide to associate a word with it, so that the word describes objects if and only if they are instances of it. Or I may associate two universals with the word, so that it describes anything which is an instance of at least one of them. Or I may decide that the word is to describe only objects which instantiate both of them. And so on. Alternatively, instead of deciding, I may
simply acquire the habit of making the association, as a result of my environment or education.

If we say that the correlation of a descriptive word with a property or set of properties, in one of these ways, gives the word its meaning, then, since it is possible to have a universal in mind without having any particular instances in mind, there is a clear sense in which the meaning which is given to the word determines the way in which it is to be applied in particular cases. The decision to associate a word with a universal or set of universals does not require the word to be correlated with any actual particular instances, so this decision is independent of and distinct from any later decision to say that some particular object is correctly described by the word. (E.g. it may be an object which one has never previously seen.) Nevertheless, the later decision is justified, or explained, or determined, by the earlier one, together with the fact that the object has such and such observable properties.

This shows that there is room for a distinction between the intended use of a word, or its meaning, and its actual use. The meaning, or intended use, explains the actual use and is therefore not constituted by it. (It seemed that Hampshire wished to deny this, in “Scepticism and Meaning”. See also Bennett: “On Being Forced to a Conclusion”, in P.A.S.Supp., 1961.)

Here is the main reason why arguments from paradigm cases are likely to be fallacious. Of course, since the meaning of a word may be indefinite in some respects, it need not fully determine the whole use, as unexpected borderline cases may turn up. (This fact seems to have obsessed Wittgenstein, in his discussion of “following a rule”, in “Investigations”, so that he overlooked the
fact that part of the use may be determined “in advance” by the meaning of a word.)

3.C.5. We can see more clearly in what sense the properties correlated with a word can determine its application or explain our use of the word, by going back to some of the examples of the previous section.

It was shown that the word “red” could be used either as an f-word, referring to a single property, the observable hue, redness, or as a d-word, disjunctively correlated with many specific shades of red. Let us distinguish these two cases by talking about “f-red” and “d-red”. A person who can see and memorize hues, may learn to use the word “f-red”, while a hue-blind person, who can only see specific shades, has to use the word “d-red”. Now suppose each of them comes across an object with a specific shade which he has never previously seen, though it is a shade of red. The first person, who can see the hue exhibited by the object, is able to recognize it as being describable as “f-red”. The hue-blind person, however, since he cannot see the hue, and does not recognize the specific shade, will say that the object is not d-red. Here it is clear that the different ways in which they correlate the word “red” with properties can explain the difference in their behaviour in the case described. In the same way, the way in which each of them correlates words and properties explains his behaviour in cases where their classifications do not diverge. The behaviour is the same in such cases, but the explanations are not, and the difference is a real one even if, as a matter of fact, no shade of colour ever happens to turn up which would show up the difference.
In other words, the difference may be of a kind which can be described only by saying what it would be like to be in the position of each of them, to be deciding in the same way as they do how to describe the things they see. They may describe the same objects with the same words, but in virtue of different facts. (Cf. “tetrahedral” example, in 2.C.8.)

3.C.6. It should be noted that it is possible for these two persons to agree in their behaviour even when they come across new shades of colour, for in such a case, the hue-blind person may somehow simply guess that people who can see hues would describe the object as “red”. Or he may simply “decide” to enlarge the scope of his d-word “red” by including the new shade as one of the properties henceforth to be disjunctively correlated with the word. Or he may simply happen to call the object “red” without even noticing that its shade is not familiar to him, though if asked why he used the word he is baffled. In all these cases the explanation of what he does, if there is one, is quite different from that of the person who sees the hue. The hue-blind person is not, from his own point of view, using the word rationally, or intelligently, or according to a rule in the cases described. His decision to describe the object as “red” is quite arbitrary, as it is not explained or justified in any way by the meaning with which he understands the word, despite the fact that other persons may be able to see a justification for classifying the object with those which he calls “red”. Here is a case where meaning does not determine use.

There may, of course, be a causal explanation for this non-rational behaviour, such as a psychological
or physiological explanation. But this does not make his decision any the less arbitrary, from his point of view. Talk about what goes on in his brain does not give a rational explanation. It does not describe from his point of view what it would be like to act as he does, for he is as unaware of anything going on in his brain as we are.

(In some cases, it may be difficult to tell whether a decision is arbitrary or not (determined by a meaning or not).)

3.C.7. This difference between a person who uses a word like “red” as an f-word referring to a single property and a person who uses it as a d-word referring to a whole range of properties disjunctively, gives some point to the assertion that they do not really understand each other, despite the fact that they describe things in the same way in general. For similar reasons we may say that persons who are totally blind or colour-blind cannot fully understand what others mean by colour-words, even though they can, in a way, use the words; for example, when a blind man asks whether the sky is red because he wants to know whether it is likely to be raining the next day or not. A blind person cannot use the word “red” in the same way as one who can see, for he cannot discover in the same way whether things are red or not. This inability is explained by the fact that he cannot see the property or properties to which the word refers. By contrast, the sighted person’s use of the word is explained by the fact that he can see the property.

If everything that explained our use of descriptive words were in the “realm of symbols” (see 2.D.8), then
the blind or colour-blind person would be able to use colour words in the same way as normal persons, since they have as much access to symbols.

3.C.8. Of course, talk about universals does not explain everything, it does not answer all questions. For example, we cannot explain the fact that the hue-blind person chooses just this range of specific shades of colour to correlate with his d-word “red” in terms of properties which he can see. Similarly, the fact that words such as “horse” and “rod” refer to those ranges of specific shapes to which they do refer is not explainable in terms of some common visible property. (See next chapters 4.A.4.a & 4.A.6.) Quite a different level of explanation is required. It may be an historical explanation, referring to some arbitrary decision made in the past, or there may be a sociological or anthropological explanation, in terms of our environment, or in terms of certain natural reactions which we all share, or in terms of our purposes in classifying things. One way of looking for these explanations is to consider factors which could cause changes in usage. But even if universals do not explain how words have the meanings which they do have, nevertheless, they explain how their having these meanings determines what we say about the world.

3.C.9. It should not be thought that all this talk about the way in which properties can explain our use of descriptive words is irrelevant to the main purpose of this essay. For the difference in the explanations of the two kinds of use of the word “red” gives us good reason
to say that the word has different meanings when it is used as an f-word and when it is used as a d-word, even if the difference does not affect the class of objects which the word happens to describe correctly. Thus, the d-word is synonymous with a long disjunction (or would be if there were enough names for specific shades of colour in the vocabulary), whereas the f-word is not. But here we are obviously applying very sharp criteria for identity of meanings, for it is obvious that for most normal purposes the difference would not matter in the least and the words would be regarded as synonymous (see chapter Two, especially 2.C and 2.A.). Similarly, when “triangular” is used as a d-word correlated with a range of specific shapes it does not have the same meaning as when it is used as an f-word correlated with a single property common to all triangular objects, if sharp criteria of identity are employed. In 3.B.4.b, etc., we saw that the word “RED” might be negatively correlated with the specific shade redange, by either a strong n-rule or a weak n-rule. Here again, for similar reasons, we must say that these rules give the word two different meanings, if we are to use the strictest possible criteria for identity of meanings. (Cf. example in 2.C.8.)

So all these examples help to illustrate the claim that by considering correlations between words and properties, we can apply strict criteria for identity.

3.C.10. The importance of all this for the purpose of this essay is that it provides us with a whole host of potential candidates for the title of “synthetic necessary truth”, which we should not be able to discuss if we used more familiar loose criteria. Thus, since the meanings
of “d-red” and “f-red” are so different (they are correlated with different properties), it seems unlikely that it is analytic that all d-red objects are f-red. But is it necessarily true? Is it necessarily true that anything which has one of the specific shades correlated with “d-red” has the hue correlated with “f-red”? And what about the converse? We are armed against the slick, question-begging argument which demonstrates that the necessity is analytic by sliding from one meaning of “red” to another: our sharp criteria will not let this go undetected. (Cf. 2.C.10.) Similarly, we can open an interesting question of the form: Is it analytic that nothing is RED and redange? (Cf. 3.B.4.d.)

3.C.11. It may be objected that my account is incomplete, since I have failed to describe how we can tell which sort of rule is being followed in some of these examples. This is, of course, only one aspect of a general problem: How do we tell which properties are the objects of a person’s mental acts? How can we be sure which property a person is thinking about, or looking at, or trying to draw attention to, or surprised by? I think I have given the beginnings of an answer to this by describing how in some cases correlating words with properties in different ways may lead persons to behave in different ways. But I do not wish to solve these problems of mind and body here. This is a phenomenological enquiry, and I am trying only to describe the use of words and sentences from the point of view of the person who uses them, and from his point of view there is certainly a difference between being; able to see the redness common to all red things and having to memorize a whole range of different
specific shades of red, no matter how difficult it may be for other persons to detect the difference in him.

The fact that we have words in English which enable us to describe the difference is strong evidence for the existence of ways of detecting it. But I shall not look for them.

3.C.12. I have so far illustrated the application of sharp criteria for identity of meanings only by comparing and distinguishing different methods of logical synthesis. But, as already remarked, there are other ways in which the meanings of descriptive words may be synthesized, and they also yield interesting examples of connections between concepts which are apparently not analytically related. Some of these will now be described.

3.D. Non-logical syntheses

3.D.1. So far, only logical methods of constructing new concepts out of old ones have been described. In this section it will be shown that there are other types of construction, which involve more or less complicated procedures for picking out properties or for deciding whether an object is describable by a word. Where such a procedure is involved in the application of a word, I shall refer to it as a “p-word”, and say that it is governed by a “p-rule”.

3.D.2. We have seen that a person who is hue-blind, but can see and memorize specific shades of colour, may learn to use the word “red” as a d-word, disjunctively correlated with a range of specific shades. If he finds it difficult to memorize so many specific properties, such
a person may adopt a procedure for picking out the right shades.

For this we require that he should be able to arrange specific shades of colour in the order in which they occur in the white-light spectrum, or to tell whether three given shades are in the right order or not. There are many different ways of doing this. For example, he may simply be able to see which of three given shades lies between the other two. Or he may simply memorize the order in which the shades occur in the spectrum (though this would again raise the memory difficulty). Or he may simply memorize the appearance of the whole spectrum and then tell whether the shade of colour of one object lies between the shades of two others by looking to see whether it does so in the spectrum as he remembers it. Perhaps he can arrange bits of coloured paper in the right order by experimenting with them until their colours vary in the least discontinuous way along the row. The differences between these various ways of judging the order of shades of colour may, as before, be detectable in cases where new shades turn up. Which of these methods is employed will make a difference to the procedure I am about to describe, but that need not concern us.

If a person is capable of making judgements of the sort “This object has a shade of colour between the shades of those two”, then he can learn to use the word “red” as a p-word by memorizing two shades which lie as near as possible to the boundaries of the red band of the spectrum and then applying the word to objects if they have shades lying between the two which he has memorized. In this way he avoids having to memorize all the individual shades, though he must, of course, memorize the
two boundary shades and the procedure to be employed. So, unlike the person who simply follows a d-rule, he can deal with specific shades of red which he has never seen before. (See 3.C.5.)

3.D.2. (Note). There are, of course, far more complicated and indirect procedures which may be used for applying colour words. Thus, a person who is completely colour-blind, and cannot even distinguish specific shades of colour, may have to employ a spectroscope, and make use of a correlation between spectroscopic readings and colour-words, in order to decide how to describe objects. Or instead he may take a “colour slave” around with him, that is someone who can perceive colours and has been trained to give the right answers to questions about colours of objects. (See Smart, in Philosophy, April and July, 1961, circa p.140.) Or he may simply ask other people, without bothering to acquire a slave.

A person who can distinguish shades, but cannot memorize them easily may have to carry a colour-chart around with him, for comparison. Even so, he must memorize the correct procedure for using the chart, such as what it is about the samples that he has to compare with the objects he wishes to describe. This may be compared with our use of metre rules and standard weights, which we require on account of our inability to memorize lengths and weights accurately. I call these standard particulars. Of course, they aid not only our memory, but also our rather limited powers of discrimination and comparison (rulers and pieces of string help us to compare lengths, weights and balances help us to compare weights accurately). That is to say, one and the same thing may
serve both as a standardized particular and also as an instrument (e.g. graduated rulers, spring balances). Notice that even with these aids, there is still always some point at which something or other has to be perceived and recognized by the observer, even if they are only numbers or letters flashed on a dial.

3.D.3. Procedures may be used in connection with shape concepts too. For example, the person who is unable to perceive and recognize the feature common to all triangles, and has trouble memorizing all the specific triangular shapes, may learn to use a procedure for picking out triangular objects.

Suppose, for example, that such a person is able to tell, by examining two objects, whether it is possible to deform the shape of one of them into the other by using only stretches and shears. Such a deformation will turn triangles into triangles, quadrilaterals into quadrilaterals, and so on, since it preserves straightness of lines and does not turn corners into straight angles. Since any triangular shape can be turned into any other triangular shape by two stretches and a shear (one stretch to get the base right, another to get the height right, and then a shear to get the vertex in the right position relative to the base) it is possible for the partially shape-blind person to memorize just one specific triangular shape, and then decide whether objects are triangular or not by seeing whether their shapes are deformable into the one which he has memorized by a succession of stretches and shears. In this way he could use the word “triangular” according to a procedure, as a p-word. Similar sorts of procedures could be used for
words like “rectangle”, “quadrilateral”, “parallelogram”, if suitable kinds of deformations are allowed.

3.D.4. There are, of course, other sorts of procedures which might be used for applying the word “triangular”, by a person who could neither see triangularity, nor discriminate and memorize specific triangular shapes. He might apply the word to objects by looking to see if they had an outline bounded by straight lines, and then uttering the sounds “bing” “bang” “bong” in sequence as he pointed to each side in turn. If he could do this without leaving out any side, and without pointing to any side more than once or uttering any of the sounds more than once, then he would describe the object as “triangular”. He need not know how to count, or read anything more into the ceremony than I have described in it. (Compare also, Nicod: “Foundations of Geometry and Induction”, Part III.)

3.D.5. Still more geometrical examples are available. The word “star” may be used to describe rectilinear plane figures in which alternate angles are reflex and acute, and the word “starlike” to describe objects with this shape. A person who could not perceive and memorize this sort of shape might pick out objects to be described by the word, by seeing whether all the sides were straight and the angles came in the order: bending in, bending out, bending in, bending out … etc., as he ran his attention round the boundary.

3.D.6. In each of these cases, a new geometrical concept is synthesized out of other geometrical concepts by means of a geometrical construction. It is not a logical
construction, since, for example, the procedure for picking out “starlike” objects does not involve looking to see whether objects have certain combinations of properties, or whether certain properties are absent, etc. The notion of a shape built up by adding straight lines one after the other, bending first one way then another and finally closing up, is different from the notion of a shape which is a certain combination of shapes or other properties. We do not, in employing this sort of procedure, look to see which properties an object has and then apply truth-tables. We use notions which do not correspond to properties of the object as a whole, in order to build up a property of the object as a whole. (So we have a kind of complexity which cannot be analysed truth-functionally, in the manner of the “Tractatus”. Compare 3.B.6, above, and 3.D.9, below.)

3.D.7. There are also many musical examples. A person who can listen to a triad (sound made up of three notes) and tell whether it is a major chord or not just by its sound, can use the expression “major chord” according to an f-rule correlating it with a single property. A person who cannot do this can nevertheless use the word according to a p-rule provided that he can hear the three notes separately (some can do this, some cannot), and can sing, aloud or “to himself” a major scale starting on any given note. (One may be able to recognize the sound of a major scale without being able to recognize the sound of a major chord.) The following procedure could then be used for picking out major chords: sing the major scale starting on each of the three notes in the triad, and if one of the scales is such that the
other two notes occur as the third and the fifth notes of the scale, then the triad is a major chord.

It is conceivable that a person may be able to recognize the sound of a major chord as a whole without being able to hear the three notes separately, in which case he could not apply this procedure. Thus we should have two different concepts of "major chord", and familiar questions would arise about the relation between them. (See 3.C.9, etc.) (Compare: most of us can recognize the characteristic timbre of a flute without hearing the harmonics separately. Perhaps some persons can recognize the sound only by listening for harmonics and seeing how they are distributed.)

Here again, the synthesis is non-logical, because the object (a sound) has the synthesized property not in virtue of having or not having several different properties, but in virtue of the fact that its various "parts" stand in some non-logical relation to one another, or some of its properties stand in non-logical relations to other properties.

3.D.8. Just as logical operations can be applied recursively, so as to construct complex semantic correlations, so also is it possible to apply logical operations to p-rules, yielding "mixed" rules. For example, a p-rule may be conjoined with a d-rule, and the whole may be negated and conjoined with a c-rule. Or a procedure may start with a property which has already been synthesized to some extent. (See 3.B.5.)

All this helps to illustrate the way in which the one-one model for semantic correlations is inadequate. We could, as pointed out above (3.B.5.) say that every descriptive word referred to one property (or, more
generally, one universal), but then not all properties could be used to explain the use of descriptive words, since some of them would be “improper” properties constructed logically or otherwise out of simpler properties, and only the simpler observable properties can explain (e.g. by explaining in detail how the procedure for applying a word works).


There are several points to notice about these examples. First of all, although a procedure may help someone to pick out something which he cannot perceive or memorize, it is always necessary for him to be able to perceive some features or properties of the objects which he wishes to describe, and he must be able to memorize something, including the type of procedure to be employed (which is, of course, a complicated universal).

Secondly, as before, we have found that two different p-rules, or a p-rule and an f-rule may both give a word very similar uses (e.g. the extension may be the same in both cases). Once more we can apply sharp criteria for identity and say that they then have different meanings (though they are the same for normal purposes), thereby leaving open interesting questions about synthetic necessary connections.

Thirdly, it should be noted that a person may learn to follow a procedure without being able to describe it in words, for one reason or another. (See appendix on “implicit knowledge”.) Hence he may have difficulty in saying what he means by a word, though he can use it as a matter of course. This helps to account for the fact that people may fail to notice how all these different kinds of rules may lie behind one and the same familiar
word, such as “red”.

Words which do not refer to observable properties, such as “magnetic”, cannot be used according to f-rules, but must be governed by p-rules or rules constructed in a complicated way out of f-rules. These words may be described as referring to “inferred” properties.

3.D.10. Finally, it may be remarked that the point in describing the syntheses of the present chapter as non-logical is that in each case the type of synthesis is restricted in its applicability to special kinds of features or properties, whereas logical methods of synthesis are quite generally applicable. They are topic-neutral. (In chapter five, topic-neutrality will be selected as the main distinguishing characteristic of logical constants, as opposed to non-logical words.) For example, when someone picks out specific shades corresponding to the word “red” by seeing whether they lie between two shades which he has memorized, the relation between the shade picked out and the ones memorized is not a logical relation; it is a relation which holds specifically between shades of colour, and in order to know what the relation is one must be acquainted with colours and know what it is like for one shade to be between two others. Acquaintance with this kind of property is required. (In Kant’s terminology: an appeal to intuition is required. See chapter seven.) Contrast this with knowing what it is like for one “property” to be the combination or disjunction of two or more others: here we have a very general kind of knowledge, for the relation in question can hold between any sorts of properties, so acquaintance with no particular kind of
property is presupposed.

(Problem: could these examples of procedures be reduced to a kind of logical synthesis by talking about “properties” which are logically synthesized in a complicated way out of both properties and relations? E.g. the property p-redness is synthesized out of the two boundary shades of colour and the relation of “betweenness” holding between shades of colours, the synthesis being logical. This does not matter much for my purposes, as the main aim was to show how to distinguish different concepts where they are not normally distinguished owing to the use of loose criteria for identity of meanings.)

Where necessary, we may describe these non-logical types of synthesis as “geometrical synthesis”, “musical synthesis”, and so on.

3.E. Concluding remarks and qualifications

3.E.1. It may be thought odd that most of my examples to illustrate the various kinds of semantic rules described in this chapter should be so contrived and artificial, and that in several cases I had to invent new words to illustrate a point, instead of using words we all know. This is because I have oversimplified many features of our use of descriptive words in order to illustrate the principles which are to be employed for making sharp distinctions between meanings. It is only to be expected that there should be some oversimplification in the early stages of the description of any system of classification. But because most of our ordinary concepts are very complicated, in ways which will be described
presently, they cannot be used without modification to illustrate oversimplified schemes of classification.

It is necessary to oversimplify at first, in the interests of clarity. Normally people start right off talking about complicated cases, and then they fail to sort out all the various complexities, having nothing with which to contrast them, and this, I think, helps to account for the fact that controversies concerning the analytic-synthetic distinction and related distinctions have gone on for so long, without any progress being made.

Thus, the importance of these oversimplified examples, as will appear presently, is that they show that it is possible for concepts to stand in definite relations, even if, owing to the complexities which we have so far ignored, and will discuss in chapter four, most of our ordinary concepts do not, a fact which sometimes leads philosophers to think that there is no clear distinction between analytic propositions and synthetic propositions.

3.E.2. One way in which my descriptions oversimplify what goes on when we ordinarily use descriptive words has been by disregarding some of the complexities in the ways in which various rules may be synthesized. For example, the ordinary word “red” is probably used partly as an f-word, by those who can see hues, partly as a d-word, by those who can memorize shades of colour, partly as a p-word, by those who can memorize boundary shades and tell whether a given colour lies between them or not, partly as a word correlated with a scientific procedure for measuring wave-lengths of light, and so on;
and all these different kinds of rules or concepts may be "superimposed" in one concept "red" without being combined definitely as a conjunction, or a disjunction, or a disjunction of conjunctions, or anything as simple as these. (This sort of thing helps to account for so called "open texture"). The meanings with which we use words are far less definite than has been suggested by the descriptions of this chapter. (This is connected with the fact that, for normal purposes, there is no need to apply strict criteria for identity of meanings. See section 2.C.) Some of these oversimplifications will be eliminated in the next chapter.

3.E.3. In addition to ignoring complications in the way in which we correlate words with universals, I have oversimplified other matters. For example, I have assumed that colours vary only in one dimension, so that all shades can be arranged along a continuous spectrum in a definite order. I have failed to take note of the difficulties in saying that the same colour (whether a hue, or a specific shade) may be present in ordinary opaque objects, in transparent objects (solid or liquid), in objects with various sorts of surface textures, or even in phosphorescent objects and neon signs. Is it the same property in all these cases? I have ignored the fact that there may be limits to our powers of discriminating specific shades of colour, or specific shapes. (Something will be said about this in Chapter Seven).

It is not possible for all problems to be solved at once. Many of my remarks are idealizations which require qualifications of one form or another, but the qualifications do not usually affect the main argument.
3.E.4. One of the main points of the discussion has been to show how people who oversimplify things even more than I have done may be led to adopt intolerably obscure and confused theories of meaning and universals, or to make sweeping generalizations in rejecting such bad theories, so that they overlook the element of truth behind them. The main oversimplification is to ignore the possibility that the use of a descriptive word may be explained in terms of complex correlations between words and universals. Insistence on the one-one model, or a determination to say that one property or universal corresponds to each word, leads people to say such things as that universals are “intangible to the senses, apprehended in thought alone, the potentiality of their differentiations, the identity to be found in variety”, etc. (See 2.D.6.) Or it prevents their seeing clearly how talk about universals can explain.

3.E.5. In showing now talk about properties and other universals can explain, we stressed the fact that the ability to use words presupposes the ability to perceive and attend to features or properties, to memorize them and recognize them again later. This explains how we can learn the use of a word from examples and then go on and use it in quite different contexts. It explains how, having learnt to use the word, we can understand its use even in false statements which ascribe properties to objects when those objects do not have those properties. All this is possible because in memorizing a property one need not bear in mind any particular object or objects having that property (cf. section 2.D) (The particulars used in teaching the meaning of a word do not thereafter have any special role in connection with it: after they
have provided the required illustration they drop out as irrelevant and may change their properties or relations without this having any effect on the meaning with which the word is understood.)

This loose connection between universals and their actual instances, or between descriptive words and the particulars which they describe, which has been so important in our explanations so far, will turn out to be very important once again in chapter seven, where it will provide the basis for an explanation of the meanings of "possible" and "necessary".

3.E.6. Despite all the oversimplifications, the discussion of this chapter has shown in a general way how correlations between descriptive words and properties can help to determine which objects are correctly describable by which words, or at least the conditions in which objects are describable by words. In chapter five, the discussion of logical constants will show how descriptive words may be combined with other words to form sentences expressing statements. So this chapter and chapter five will together have shown how correlations between descriptive words and properties can help to fix the conditions in which statements are true. The importance of this for our main problem is that it helps to explain how the analytic synthetic distinction works by showing how it is possible for a statement to be analytic, or true in virtue of its meaning. We shall see that analytic statements form merely a special case of the class of all statements which are true in virtue of both what they mean and what the facts are.