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III.—HEGEL'S TREATMENT OF THE CATEGORIES OF THE SUBJECTIVE NOTION.¹ (II.)

BY J. ELLIS MCTAGGART.

JUDGMENT OF SUBSUMPTION.

Singular Judgment.

ALL Judgments of Inherence are, as we have said, Singular. The Judgment of Subsumption, which is derived from the Judgment of Inherence, will consequently start as a Singular Judgment. Its outer form will therefore be exactly the same as in the Positive Judgment of Inherence,—for example, "This is red". But the difference is that, in the Judgment of Inherence, the singularity of the Judgment was an essential part of its nature as a Judgment of Inherence. Here, on the other hand, it is merely the form with which we start, which can be modified if it is not found to be a suitable form.

Particular Judgment.

That it is not a suitable form has been already shown, and the increasing definiteness of the ideas only makes the imperfection of the formula more plainly obvious. Again we find an Individual and a Universal, with no possible connexion between them except identity, which identity is impossible by their very definitions. We must pass on. Instead of taking a single Individual, we must take, as the form of Subsumption entitles us to do, several Individuals at once. Thus we reach the Particular Judgment,—“Some roses are red”.

It will be noticed that we have done more than increase indefinitely the number of the Individuals. Our Singular Judgment had only one Universal—red. But our Particular Judgment has two—rose and red.

¹ Read before the Aristotelian Society.

How, it may be asked, were we entitled to make this advance? It implies that whenever two or more things have one common quality, they will also have another. Now we are entitled to assume this, because we have seen that you can always find a common quality for any two things if only you go high enough. In the last resort there are qualities common to everything—that they are real, that they have external connexions, and so forth. So, when we have predicated a Universal of any two or more Individuals, however dissimilar in other respects those Individuals may prove to be, we know that some other Universal may always be found, which they have in common, and we shall be enabled to put our assertion in the form Some A are B—where A and B are both universals.

Of course, the higher we have to go for our second universal, the less information we get. "Some judges are corrupt" is a much more interesting and significant proposition than "Some officials are corrupt," and the latter again is an improvement on the more general proposition "Some men are corrupt". But although the importance of the proposition which we can obtain may vary, some proposition of this form will always be true. Every Universal will have more than one Individual under it, and these Individuals can always be stated as coming under yet another Universal.

And this fresh way of stating them is essential. For merely to take a plurality of isolated Individuals instead of a single one, would not solve the problem, but leave it as hopeless as before. The same difficulty would occur about each Individual separately, and the only change would be that it would be repeated many times over. It is not transcended till we have grouped the Individuals under another Universal, and so made the Judgment the expression of the relation between two Universals.

Judgment of Allness.

To make it more definite must be our next step. A Particular Judgment can never be a full account of the facts to be explained. It marks out a class and says that some members have a certain quality, and some have not. This, taken by itself, is to assert of each member of the class the same proposition,—it may or may not have the quality. But this is not the truth. Of some members of the class we must say, if we are to speak the truth, This has the quality; of others we must say This has not the quality. Instead of making the same problematic statement about all of them,

we must make one of two definite statements about each of them.

Now we cannot take them one by one, and, pointing to each in turn, say This has it, This has not it, and so on. For then we should have got back to predicating Universals of mere Individuals as such, and this we have seen already to be inadmissible. Since the Individuals of the subject, then, are not to be taken as Individuals, they must be united by a Universal—there is no other way. And we have just seen that it will not do to unite them by a Universal which covers more Individuals besides them, since this will give only a Particular Judgment. There is only one course left. We must group our Individuals by means of a Subject-Universal which just covers them, so that we can say that wherever the Subject-Universal is found the Predicate-Universal will be found too. In other words, we must be able to make general propositions. We must be able to say All A are B. All the Individuals, of which the predicate can be affirmed, need not indeed be brought under the same Subject-Universal. That would mean that we had discovered an invariable antecedent to B, and could say, not only that All A is B, but that All B is A. This is unnecessary. What we must be able to do is to bring all the Individuals, of which B is predicated, under some Subject-Universal or another, so that, whenever we predicate B, we have some Universal which is invariably accompanied by B.

The advance which is made in this category is evident and striking. Here, for the first time, we become entitled to assert general propositions. That is to say, for the first time science becomes possible. However certainly and clearly it be known that everything stood in relations of reciprocal causality with everything else, and that nothing happened without a cause, this would be insufficient for science. Unless the results of that determination could be expressed in general propositions, so that we can say that some are always or never found in conjunction with others, it would be impossible to classify, to predict, or to explain.

The step is important, and it is one at which the sceptic often stops. He will admit, sometimes, that there really are general qualities—qualities possessed by more than one Individual, but he will deny that there really are any general laws connecting one quality with another. He does not merely assert that the general laws which we have in fact discovered have much that is subjective and erroneous about them, which no one could deny to be true in the present imperfect state of our knowledge. He asserts, further, that

there are no valid and objective laws to be found, that the objective truth lies only in the particular Individuals, that the uniformities we have found, when true, are merely accidental, and that we have no right to assume that they do exist in cases where they have not yet been found.

It may be worth while, therefore, to recapitulate the steps which have led us to our present conclusion. The Individuals of which a certain Universal can be predicated must be either isolated or connected. If they are connected it can only be by a second Universal introduced into the Subject. Now this Subject-Universal may either include other Individuals of which the Predicate-Universal is not true, or it may include only those to which the Predicate-Universal does apply. We have thus three cases. The first gives the Singular Judgment, and that we have seen, in the Judgment of Inherence, to lead to contradictions if we try to take it as an independent and adequate form. The second gives the Particular Judgment, which we have also seen to be inadequate as an independent form, since it only predicates the same uncertainty about all the members of a class, although the truth is that some of them are certainly one thing, and some of them certainly the other. There remains only the third alternative, and this gives what Hegel calls the Judgment of Allness—All things which have the Subject-Universal have the Predicate-Universal.

That it is by the Judgment of Allness we are to escape from our difficulty, if we are to escape from it at all, seems clear, since it is the only alternative left. But can we escape in this way? Does the Judgment of Allness avoid the difficulties which made us surrender successively the Singular and the Particular Judgments?

The defect of the Particular Judgment is obviously removed by it. That defect was that it did not enable us to say definitely of each Individual included in the Subject, whether it did or did not possess the Predicate. But with the Judgment of Allness we can say definitely of each of those Individuals that it does possess the Predicate.

The defect of the Singular Judgment lay, as we have seen, in the fact that the Subject and the Predicate could not be regarded as identical. Nor are they identical in the Judgment of Allness. If we say All lions are mammals, it is true that there are many mammals which are not lions, and that lions have many qualities not shared by the rest of the mammalia. But we have now risen to a point at which it is no longer necessary to identify the Subject and the Predicate. We do not require to say here that the

Subject-Universal and the Predicate-Universal are in any sense identical. Our proposition only means that, wherever the Subject is found, the Predicate will be found also. This relation was not possible in the Singular Judgment, because the Subject there is a mere Individual, and therefore had no significance apart from the Universal, since, as we had previously seen, its whole nature was made up of Universals. It had not enough independence to enter into any relation with the Universal which required it to be in any way distinguished from the Universal. Its relation could only be simple identity—if that can be called a relation—and that was contradictory. Now, on the other hand, the Subject, defined by a Universal, has an independent meaning, and can enter into a different relation with the Predicate. We speak now, not of identity, but of the co-existence of Universals. There is therefore no longer any difficulty in the fact that the two Universals have different connotations and denotations, and thus the Judgment of Allness has vindicated its right to be considered as a synthesis, since it has transcended the defects both of thesis and antithesis.

The result gained may be stated from another point of view—that it is impossible to suppose that the only connexion of the various Universals which are found in any Individual is its mere abstract Individuality, and that the Universals have no connexions among themselves. For the abstract Individuality, as distinct from the Universals, is a mere nonentity, incapable of bearing this, or any other, burden. If the Universals are found together—and that we saw they must be—there must be some ground of connexion between Universals themselves.

In thus transcending Singular and Particular Judgments, we do not, of course, pronounce them to be false, but only inadequate. It may be quite true to say "This is red". What we have gained in this triad is the knowledge that This (whatever it may be) could not be red, unless it belonged to some class of things, defined by some other Universal, of all of which redness might be predicated.

We now leave the Individual for the present. Our Judgment has become a relation between Universals, and the rest of the Subjective Notion is occupied in developing this relation. A certain one-sidedness caused by this will be counterbalanced in the Objective notion and synthesised in the Idea.

JUDGMENT OF NECESSITY.

Categorical Judgment.

The general propositions, such as All A is B, which we reached in the Judgment of Allness, involve the existence of some connexion between the Universals A and B. Such a proposition cannot merely mean that we have enumerated all the Individuals who have the quality A, and, finding out that each of them has the quality B, have summed up our various discoveries. For such Judgments would not be Universal at all. They would be mere collections of Singular Judgments, and therefore, of course, unable to perform their task of transcending the defects of Singular Judgments. Our Judgments of Allness then mean that the possession of the one Universal is connected with the possession of the other, not merely by a uniform accident but by some relation between the Universals which brings it about as a necessity.¹ This brings us to the next triad, which Hegel calls the Judgment of Necessity. The first form of this is the Categorical Judgment. This, as is to be expected, is practically identical with the Judgment of Allness. It only affirms, in so many words, that connexion between the Universals which formed the essence of the Judgment of Allness. This slight increase in explicitness is marked by discarding the form of Subsumption which was still left in the Judgment of Allness. That is, instead of saying "All lions are mammals," we now say "The lion is a mammal". Or again, instead of "All Privy Councillors are styled Right Honourable," we say "The Privy Councillor is styled Right Honourable". The last example may serve to remind us that the Categorical Judgment is not confined to ultimate truths, nor to propositions dealing with what Mill calls Natural Kinds. Any connexion, which can be asserted as always existing between two Universals, can be expressed in a Categorical Judgment.

Hypothetical Judgment.

This is only a more explicit way of putting the connexion between Universals which constitutes the Categorical Judgment. It follows immediately from the Categorical Judgment. If we say "The A is B," this asserts that B is one of

¹ Whether this necessity may not be *based* on a number of Singular Judgments, although it cannot *be* those Judgments, is another question. We shall have to discuss it later on, when we come to deal with the Syllogism of Reflexion.

the qualities of every A. A, of course, has other qualities. Let these other qualities be called X. Then it is at once clear that, if anything is X, it is B. Here we have the Hypothetical Judgment. The advance, such as it is, consists in eliminating the slight suggestion of Subsumption, which remains even in the Categorical Judgment, and so bringing out more clearly the necessary connexion between Universals which is the essence of the Judgment of Necessity.

Disjunctive Judgment.

It is clear that Categorical and Hypothetical Judgments do not admit of simple conversion. It does not follow because all A is B, that all B will be A. It may be so in some cases, but we can never logically advance from the one statement to the other. And we know that in all cases it cannot be so. For if all Judgments were simply convertible a Universal could never be connected by them with any Universal wider than itself. And thus we could never express by Universals the relation between two Individuals which resembled one another in some points but not in others. And since we saw that the nature of Individuals could only be expressed by Universals, this involves that such a relation could not be expressed at all. And, as it has already been shown that every Individual must be like and unlike every other, it follows that it would be impossible by such Judgments to express the nature of Individuals at all.

We know, therefore, that in some of our Judgments of Necessity the Predicate will be wider than the Subject. All A are B, but there are some B which are not A. Now these Individuals which are not A cannot be B as simply isolated Individuals, as was proved above. Each of them must have some Universal, with which B is invariably connected by another Categorical Judgment. How many of these there may be we do not know, but we know that every case of B must have one of them. Thus we arrive at the conclusion, all B is either A, or C, or D, where C and D represent an unknown number of Universals. This is the Disjunctive Judgment.

The view of the universe which results from the establishment of the validity of this category can be stated as follows: The similarities and dissimilarities of Individuals may be expressed by general propositions concerning the relations of Universals of different extent, which are such that the presence of the narrower Universal implies the

presence of the wider, and that the presence of the wider Universal implies the presence of one of a certain number of the narrower.

This, of course, like all the categories to which Hegel has given the names of Judgment and Syllogism, relates to the reality which is the object of knowledge, and not to the mental processes by which we come to know it. The repetition of this may not be unnecessary, since the constant use of the terms of formal logic is apt to confuse the student the moment he is off his guard. In this case the distinction is clear. From the admission that reality is such that it cannot be adequately expressed without Categorical Judgments, it has been easy to deduce that it is such that it cannot be expressed without Disjunctive Judgments. But if our knowledge entitles us to make a Categorical Judgment on any subject, it by no means follows that it will entitle us to make the corresponding Disjunctive. We may know that the lion is a mammal, and be very far from knowing the complete list of species to one of which every mammal must belong.¹

SYLLOGISM.

QUALITATIVE SYLLOGISM.

Another question now arises, and compels us to enter the third and last division of the Subjective Notion. We have said that two Universals are necessarily connected. How, and by what, is this necessary connexion made? It is a connexion of two Universals which are not identical, for if they were the proposition would be utterly trivial. On what can we base this union in difference?

To the triad in which this point is settled Hegel gives the name of Syllogism. This seems to me an inappropriate term. The first of the three divisions does indeed correspond closely to the Syllogism of Formal Logic. But the second corresponds to Induction, which is not usually called a Syllogism. To the third division the name is still more inappropriate, since in it the necessity of mediation by a third term is, as we shall see, transcended altogether. But, in the absence of a better name, it will perhaps be advisable to retain this one.

The problem which we have now before us is one which

¹ I have omitted Hegel's triad of Judgments of the Notion (see Note C, which, with the other notes of the series, is here omitted for want of space).

might have presented itself at any point in the Judgment of Necessity. For as soon as it was realised that the connexion between the two terms in the Judgment was asserted as necessary, the question as to the ground of that connexion will require an answer. It becomes however more imperative when the Judgment of Necessity has completed its development, and assumed the form of the Disjunctive Judgment. For when we find that B is, in some cases A, in some C, and in some D, the need for a cause of these varied relations becomes more obvious, though not more real, than when we affirmed the uniform relation All A is B.

Now, if we try to answer this question by inserting a middle term between the two Universals, this middle term must either be another Universal or else one or more Individuals. There is no other alternative. As we have already established the fact that there *is* some connexion between Universals, it will be natural to try and avail ourselves of this as the middle term. We connect A with M, and M with B. In this way we should assert that the manner in which Universals were connected was expressed by the ordinary Syllogisms of deductive formal logic. The simplest examples of these are to be found in the mood Barbara—for example, “All men are mortal, all philosophers are men, therefore all philosophers are mortal”.

Hegel calls the middle term of the Qualitative Syllogism Particularity.¹ This does not appear to have any very definite connexion with the Particular Notion, as it was described previously. What it seems to signify is that the Universal does not here manifest its true nature (which will become evident in the last subdivision of all), by which it is inherently and ultimately connected with other Universals, but is, on the contrary, regarded as a hard and fast unit, which can only be connected with anything else by external links. But why this should be called Particularity is not obvious.²

SYLLOGISM OF REFLEXION.

To connect two Universals by means of another is often a perfectly legitimate and indispensable process. But if we take this method of connexion as a category, and so claim for it universal validity, we find that it is contradictory. The problem, to solve which it arose, was How can two

¹ *Enc.*, section 182.

² Hegel divides the Qualitative Syllogism into the First, Second, and Third figures. But this seems to me to be indefensible (see Note D).

Universals ever be connected? The answer here given is By the connexion of each with a Universal. This answer presupposes the solution of the difficulty it proposes to solve, and is therefore worthless.

And so, if we ever tried to explain anything by this principle, we should be involved in a False Infinite. When—to take our former example—we have connected philosophers and mortality, by using man as a middle term, we should have to find two other middle terms—one to connect philosophers and man, the other to connect man and mortal. When we had found these, four more would be required to connect them with the terms which they were to connect, and thus we should only solve one problem by raising two more, and so on for ever.

If a Universal will not serve as the middle term, there is only one alternative left, if we are to have a middle term at all—the Individual. With the attempt to make the Individual the middle term we reach what Hegel calls the Syllogism of Reflexion.¹ We have already seen that it is impossible that the Universal Judgment should be *equivalent* to a series of Judgments about mere Individuals. We have now to consider whether the Universal Judgment can be *based* upon such a series.

LAWS OF NATURE.

Categorical Laws.

To do this is impossible. We saw, in dealing with the Judgments of Inherence and Subsumption, that a Judgment about an Individual could only be valid when it was dependent upon a Universal Judgment, and that an Individual Judgment taken by itself is contradictory and inadequate. Since all Individual Judgments must be based upon Universal Judgments, it is obviously out of the question that all Universal Judgments should be based upon Individual Judgments.

What is to be done now? We have reached the conclusion that to demand the mediation of all Universal Judgments is useless. Whether we attempt to mediate, then, by Universals or by Individuals, we find that insuperable difficulties present themselves. Only one alternative remains—to deny the necessity of mediation, at least as a universal requirement.

In this way alone shall we be able to escape from our

¹ This also is divided by Hegel into three subdivisions (see Note E).

difficulties. We are led to the conclusion that there exist certain laws—certain conjunctions of Universals which do not require explanation, but are themselves the basis from which everything else can be explained. These ultimately valid Judgments I should propose to call Laws of Nature.¹

Not all Judgments of Necessity are Laws of Nature. Many of them are merely subordinate and derivative, and can be deduced from others. But the existence of those Judgments which are not Laws of Nature is only possible on the supposition that there are others which are Laws of Nature, and from which the subordinate Judgments can be deduced.

Nor, again, is it meant that we can know these Laws of Nature *a priori*. We know *a priori* by the dialectic that there must be such laws, and that all Universal Judgments must be deducible from them. But what they are can only be known to us empirically and by induction, and so can never be known with absolute certainty. This of course does not make the existence of the category any less certain *a priori*. This point is important, as Hegel's assertion, that we know *a priori* that there are such Laws, seems sometimes to have led to the impression that he supposed that we could deduce the Laws themselves by pure thought. The real state of the case may be illustrated by the lower categories. The category of Quantum tells us that everything must have a definite magnitude. This is certain *a priori*, although we can never find out the magnitude of any particular thing except by an empirical process of measuring, into which it is always possible that some small inaccuracy has crept.

Our result is, then, that there exist certain laws in the universe which are not merely analytic, which are not deducible from others, and which are not mere generalisations from instances, although they can only become known to us by generalisation from instances. The first two points would, I suppose, be almost universally admitted. Few people would be disposed to deny that it is impossible that every truth should rest on another without any being ultimate. And, in the present day at least, it would be generally allowed that it is impossible to reduce all our knowledge to merely analytic propositions.

But it is sometimes asserted that general laws have no objective validity at all. All that is really objective, it is said, is the various Individuals, together with the qualities which

¹ See Mill's *Logic*, book iii., chap. iv., section 1. For Hegel's nomenclature in this triad see Note F.

render them like or unlike one another. If we find two qualities together in several cases, we have a tendency to expect one whenever we see the other, and we find that this tendency, when we take certain precautions, is so often right as to be of great assistance to us. Indeed life would be impossible except for it. But the general propositions thus formed are mere creations of our minds, and have nothing corresponding to them in the objective world, which consists of nothing but particular facts.

We have seen that this view is untenable, since it involves the ultimate validity of Judgments dealing with Individuals as such. But it may be worth while to consider it from another standpoint and to show that the process of Induction cannot lead to any valid conclusions whatever, except on the hypothesis that some Universal Judgments have objective validity, and that the purpose of Induction is to discover, and not to create, those Judgments.

All Induction can be reduced to this typical formula, This is A and B, that is A, therefore that is B. All the elaborate devices of science are based on this,—that the presence of one quality in a thing is a ground for expressing the presence of another quality, which has on other occasions been found in company with the first. Now if we assume that there are objective Universal Judgments,—that one quality is objectively connected with another—then the presence, in any case, of two qualities in the same thing, gives some reason for supposing that they are connected, and will therefore be found together elsewhere. The mere occurrence in a single case would, indeed, be a very slight ground for such a conclusion, but one which might be indefinitely strengthened if several other instances were examined, and also found to possess both qualities, and if these instances were such as to render a mere chance coincidence improbable. In this way an Induction may be strengthened till it reaches almost complete certainty.

But on the hypothesis we are now considering there is no objective connexion of Universals which we can presuppose—only a subjective connexion, which is merely the result of the Induction, and cannot therefore be assumed in making the Induction. It therefore follows, that, in making the Induction, we have not the least right to assume even the slightest probability of A being really connected with B, in the first of the two cases. The fact that each of the two cases is A must be struck out as irrelevant. Our formula then becomes This is B, therefore that is B,—which is plainly absurd, since, if it had any validity, it would enable

us to predicate any quality, which was possessed by any Individual, of every other Individual in the universe.

It is evident that on this we can found, not only no approach to certainty, but no probability or presumption, even of the lightest kind. If two Universals are never connected, except in our subjective expectations, then the presence of two Universals in one Individual can never give the least probability that one of them will be accompanied by the other in another Individual. If, on the other hand, two Universals are really connected, then general laws have objective existence, and are not merely our inferences from particular cases.

Our antagonist may, however, take up a more definitely sceptical position. He may admit that the inference which is made in Induction is perfectly unjustifiable from a logical point of view,—that the conclusion is not made in the slightest degree probable by the premises. But he may say that he never put it forward as logically justifiable, but simply as actually existing. We have, he may say, a natural tendency to expect B to accompany A in one case, if we have seen that it accompanies A in another. We may not be able to justify this impulse, but we cannot deny the psychological fact that we have it.

This position however involves a contradiction. For it denies the validity of general propositions by an argument of which general propositions are essential links. No general proposition is logically defensible—this is itself a general proposition. If, therefore, we make it, by that very act we condemn it as logically indefensible. It is impossible to state this view without denying it, and the result would be, not merely the rejection of one species of knowledge, but complete and utter scepticism. And complete scepticism is in the same plight as self-contradiction. For if you assert that nothing is certain, you assert, among other things, that your denial of certainty is not certain.

Besides these general considerations an argument *ad homines* may be addressed to those who assert the basis of inference to be an irrational impulse. They do, in point of fact, trust to it. And not only do they trust inferences when they have made them, but they take great trouble to put themselves in a position to make more. They conduct, or speak with approval of others who conduct, researches in physical science. They laboriously accumulate instances, and examine what general qualities are found in combination in them, for no other purpose, on their own showing, than that they may become the victims of an irresistible, though

indefensible, impulse to believe that in other instances, as yet untested, the presence of one of these qualities will be a mark of the presence of the other.

Their answer is that it is found in practice that to trust to this impulse produces on the whole useful results, and that, indeed, if we did not trust to it, it would be impossible to live at all. Now it has, no doubt, been found in the past that such inferences, if made with certain precautions, will in many cases be useful. But why should this cause us to trust them in the future? Only if we make an inference from the utility of some inferences in the past to the utility of other inferences in the future. And thus our attempt to give a merely practical value to inference breaks down, since we cannot do it unless we admit one inference at the least to be logically defensible.

To return from this digression—the simplest form which the Law of Nature can assume will be the Categorical; for example, “The lion is a mammal”. The proposition, it will be noticed, is exactly the same in its external form as that of any other Categorical Judgment. It differs from the latter only in the implication that it is one of those Judgments, which we have now seen must exist, which are true, not as deductions from any other, but in their own right. As knowledge advances many propositions, which were once accepted as ultimate, and considered to be Laws of Nature, are found to be deducible from others, and lose that title. Our conviction that a certain Judgment deserves to rank among ultimate Laws is generally only negative—*i.e.* it rests on our inability, for the present at any rate, to find a more fundamental Judgment on which to base it.

Hypothetical Laws.

This transition is exactly the same as the corresponding one under the head of the Judgment of Necessity. All Categorical Judgments have their Hypothetical equivalents, which are true if the Categorical Judgments are true, and this applies, of course, to those ultimate Judgments which are called Laws of Nature. If it is an ultimate truth that the lion is a mammal, it is also an ultimate truth that, if anything possesses the qualities which define a lion, it will be a mammal.

Disjunctive Laws.

Here, too, the transition is the same as in Judgments of Necessity. Since the various Universals have between them

to unite and to differentiate everything in the universe, their ultimate connexions must, in some cases at least, be between Universals of different extent. It will happen then with Categorical Laws, as it did with Categorical Judgments, that in some cases the Predicate-Universal will be wider than the Subject-Universal. The Individuals included under this further extent of the Predicate, must be connected with it by one or more other Subject-Universals. And so, by enumerating all the narrower Universals which come under a wider one, we get the Disjunctive Law—the final form of the Subjective Notion.

Here we have the essentially Hegelian idea of the self-differentiating Notion. The phrase is a rather alarming one, and seems to suggest mysterious and recondite activity. But the reality is simple. It means nothing but a Universal, which is always accompanied by one of a certain number of subordinate Universals which are not deducible from it, but which are peculiar to it. Thus, if we take the co-existence of the chief characteristics of animals as an ultimate truth, we may get the Law—All vertebrates are either mammals or fish (leaving out the other sub-classes for the sake of brevity). Every vertebrate will have one of these additional qualifications. They are not deducible from the mere idea of a vertebrate animal, in which there is nothing which would prevent all vertebrates from being mammals, or some of them from belonging to some sub-class which does not in fact exist. And the sub-classes are peculiar to the class, for there are no mammals or fish which are not vertebrate. This is the connexion of Universals which has been rendered necessary by the conception of Individuals as similar and dissimilar with which the Subjective Notion started.

The conception of a self-differentiating Notion has been rather misunderstood. It is sometimes supposed to mean that a Universal—when it is one of the ultimate Universals which enter into Laws of Nature—splits itself up by pure thought in the same way that the dialectic advances by pure thought. You have only to take the idea of a class and examine it with sufficient care, and it will proceed to develop the ideas of its sub-classes. In fact, the old story of the German who conducted his zoological studies by endeavouring to evolve the idea of a camel out of his inner consciousness, is scarcely a parody of what is supposed by some people to be Hegel's theory on this subject.

Such a theory is obviously incorrect, nor do I believe that there is the slightest evidence for the view that it was Hegel's. The only case in which Hegel professes to evolve

anything by pure thought is in the dialectic. He there evolves only categories, which are themselves forms of pure thought. The great majority, on the other hand, of the Universals which appear in Laws of Nature have an empirical element in them. And there is no evidence whatever that Hegel imagined that a new empirical idea could ever be produced by pure thought.

Nor, even in the dialectic, does Hegel give us a Notion differentiating itself by pure thought. The lower (in the sense of the less adequate) passes into the higher, but the higher (in the sense of the more extensive) never divides itself up into the lower.

The self-differentiation of the Notion, then, does not imply any inherent dialectic. It only means that it is an ultimate and inherent characteristic of the Notion that it is always united with one of several others. What these others are must be discovered by us through observation and experiment, and, when they are found, the conjunction must be accepted by us as an ultimate fact.

We have reached now the conception of a regular system of laws proceeding from the more general to the less general, embracing at the top the whole of reality in a single unity, and at the bottom accounting for every quality in every individual. This conception did not develop till the Disjunctive Laws were reached. A Categorical Law connects one Universal with another wider than itself, and leaves the rest of the extent of this wider universal undetermined. No Categorical Law, therefore, can deal with the whole of the field to which it refers. But in a Disjunctive Law the whole of the field covered by the Subject-Universal is systematically divided and determined. And, since all Individuals must have some common quality, the widest Subject-Universal to be found in any Disjunctive Law must be one which includes all reality, and the network of laws will be co-extensive with the universe.

Let us recapitulate briefly the more striking points in our advance. We started, in the Universal Notion as Such, with general qualities. We gained the idea of classification, for the first time, in the Particular Judgment, where, for the first time, we were concerned with the relation of two Universals. In the Categorical Judgment we made the all-important advance to universal truths, and in the Categorical Laws we perceived that universal truths were not only true, but ultimate. Finally, in the Disjunctive Laws we find that these ultimate general truths form a systematic whole.

In this process we see that the element of contingency

gradually becomes less and less. When we first reached Categorical Judgments we had no criterion of the importance of these Judgments. All Categorical Judgments which were true, were on a level. It was left entirely undetermined what things should be grouped with what, because it was left entirely undetermined what Universals we should begin by taking as the bases of our fundamental divisions. But we begin to transcend this contingency when we reach the Categorical Laws of Nature. For we know that these are ultimate, and all other Categorical Judgments can be deduced from them, and this gives us a standard of importance. Those relations between Individuals which are indicated by Laws of Nature are the vital and essential relations, and a classification is natural and significant in so far as it expresses these. And in the Disjunctive Laws this becomes more explicit. For there we see that the ultimate laws form a regular system, extending over all reality, and accounting, directly or indirectly, for all the qualities of everything. We have thus a complete classification objectively existing, and our particular classifications will have value in so far as they approximate to this.

Here the Subjective Notion ends. The question which will next arise—how are some Individual As determined to be B and not C, and others to be C and not B?—will carry us on to the Objective Notion.