

Division I. Formal Study of General Logic.

Chapter I. The Law of Association

§1. The law of thought is the law of the association of ideas. The association of ideas consists in their blending and spreading over into one another. This is a process of unification. Kant, the father of modern philosophy, said that the function of concepts is to reduce the manifold of sensuous impressions to unity.

§2. Sense is manifold in itself, more than one way. It presents a multitude of particular impressions, equally to be taken into another with them, as reason for thinking, which is the

blending with like thoughts in European countries. It presents, in the second place, a manifold of relations of ideas, and its parts, in the third place, a manifold of concepts, which are segregated into distinct groups, and

of reason to us, and that of the combination of all of any quality, or both, and that of the combination of different qualities

is full of the particular and whole than that himself for more

which appears in one state when it is combined with the real

there is no absolute demarcation from a neighboring condition  
 nature. (A)

§ 18. There are distinguishable grades in the process of  
 unification. That universal conception which is nearest to  
 sense is the conception of the parent, in general. This is a conception  
 because it is universal. It represents the object of attention, in  
 general. \* But the act of attention does not turn the object into  
 any particular sense, as it only seizes a fleeting phenomenon,  
 as one might catch a fly; it makes an It of it. We will leave  
 this conception, Substance. It is the making of an It out of a  
 group of feelings.

§ 19. In like manner, as Substance is the universal substance  
 the universal of sense, so we can generalize the quality of  
 sense. The understanding of a fact consists in pronouncing  
 something to be true. To do so is an act of substance  
 joined a thinness; and the conception, not of the thinness, but  
 of the junction, makes the conception we call Being.

If we say "The wall is black," the sense is the substance, for  
 which its blackness has not been differentiated; the is, while being  
 the substance just as it was seen, declares that it is about to rationalize  
 its confuseness, which it does, in measure, immediately after, by  
 applying to its blackness as a quality.

\* This is not as if we see an object in a particular position and say  
 "The wall is black," but as we have seen full brought by our eye's principal rays



§20. The medical doctors speak of precision, by which they mean præsecutio, or forth-calling; and thus we have in logic the word precision, as a name for the same operation which is otherwise termed abstraction, drainage. What is meant, is that kind of mental separation which results from attention to one element of an idea, and neglect of the rest. It may be doubted whether that is a very successful analysis of the operation. It would be less objectionable to say that in abstraction we suppress one part of a phenomenon, without any particular designation of what is left apart. Thus, I may suppress the chess-board which I am sitting at, have no action whatever on light, so that it is quite invisible to me. If I suppress its rigidity and so on, and abstract from its color and visibility, I am suppressing space, and so on. I have never and do not myself believe, at least four dimensions, and with all the habits of a lifetime of contemplating three dimensional, perhaps 4 dimensional things. I have never seen a four dimensional thing, but I have perfectly well comprehended it, and I have diligently studied the subject, and have made four dimensional things, and I can rather slowly and painfully make out the successive appearances which would present themselves, if I were to walk about in such a space. Pictures and models of four dim. things would not be very true models, if they were turned and viewed in the usual way, actually. There are more than three dimensions. I can, therefore, abstract from the tridimensionality of space.

The process of abstracting or precision, must be useful, distinguished from the other mental operations, one of which distinguishes, and another separates some complete operation, while the

other, discrimination, is a complete separation.

Discrimination is a mere distinction of meaning. Thus it is impossible to suppose there is color, without <sup>supposing</sup> the existence of space. Accordingly, although I can readily suppose the existence of color from space, I cannot be supposed unless these discriminations, or least, But we can perfectly well distinguish color from space; for this merely consists in recognizing that color involves something inseparably involved in the supposition of space.

Dissociation is imagining one thing without imagining another; and the ability possibility of doing this depends upon the amount of our experience, upon our training in plain various or imaginary in novel situations, and other accidents of life. One man may be quite unable to dissociate elements of experience, while a better trained mind can dissociate without difficulty. For few people can imagine space without imagining color, and vice versa, suppose uncolored spaces to exist.

Association is not a reciprocal process. It frequently happens that while A cannot be presented from B, B can perfectly well be presented from A. The reason of this is a general elementary conception based only arises upon the occasion of experience, that is, they are produced according to general laws, the intensity of which is the intensity of experience. When the intensity of experience does not reduce the intensity of experience, the intensity of experience is not reduced to the intensity of experience. But if the intensity of experience could be definitely impaired with the intensity of experience, this latter would not reduce them to unity. Hence the intensity of experience (or more impaired into conception) cannot be definitely impaired with the intensity of experience. The intensity of experience is not reduced to the intensity of experience, but is multiplied into conception.



there is, in general, no reason why the premises which have occurred  
it should not be neglected, and therefore the explanatory conception  
may frequently be preceded by the more material conceptions and  
from the impressions.

§21. The facts now collected afford a basis for a systematic method  
of searching out whatever universal elementary conceptions there may be  
intermediate between the manifold of substances and the unity of being. It  
has been shown that the occasion of the introduction of a universal elemen-  
tary conception is either the reduction of the manifold of substances to unity  
or else the conjunction to substances of another new person. And it has  
further been shown that the elements conjunct cannot be separated  
without the conception, whereas the concept can generally be separated  
without these elements. Now, empirical psychology discovers the  
occasion of the introduction of a conception, and we have only to  
ascertain what conception already exists in the mind which is united to  
that of substance by the first <sup>substantive</sup> conception, but which cannot be separated  
from it. ~~It is not possible to have the real concept of substance~~  
~~without the concept of being, and the concept of being is not~~  
~~inferred from the concept of substance.~~

It may be noticed that throughout this process, introspection is not  
resorted to. Nothing is assumed respecting the subjective elements of  
consciousness which cannot be securely inferred from the objective  
elements. Some psychologists assume that that which is directly in  
the mind is the classical possible thing to know. But there is a fallacy  
in this. One does not know that it is possible to be angry without  
knowing that one is angry. There are different ways in which  
things may be in consciousness. It is not enough to be in consciousness  
to be utilized.

§22. The conception of Being comes when some thing is offered  
considered. True. When we make a judgment, we think in  
the first place about something, and then we think about it to be  
true about that thing. That is, we think that Substance of objects we  
are thinking to have a Quality. \* Quality is thus the first conception in  
order in passing from Being to Substance.

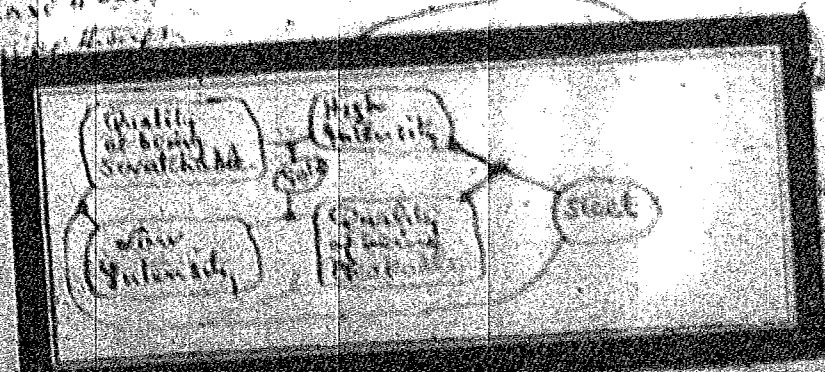
Quality seems at first sight to be given in the impression; but such results of  
introspection must not be trusted. We judge one conception to be applied to  
another, more directly experienced. But the other conception, which is less experienced  
and more ideal, that is, more like known in the way in which an idea is  
known, this, I say, is regarded as having a sort of ideal being independent  
of its being more embodied in that particular thing. For instance, upon  
watching a tree occurant, I exclaim, what signifi, what stamp individ. It  
is of the int. which I judge to possess that simultaneous movement, is a  
personally known, but like a certain experience, I know some thing  
inseparable about it which no description however elaborate can completely

\* Quality is here used for a term which was considered as related to a  
second object. The word quality had several meanings in Latin, which  
it has become rather a vague term. It comes from the Latin *qualitas*,  
word invented by Cicero to translate Aristotle's *ποιότης* and *ποιότης*,  
Aristotle gives a certain definition of it, which is called the "predicamental"  
sense, since in that sense it was taken as a predicament, or category, by the  
School of that philosopher. Namely, he defined it as (1) character, (2) having  
contrary (3) admitting of differences of degree, and (4) being inseparable  
things agree and differ. This is the most proper sense of the word; but at work  
ever consistently confined it to this meaning. Aristotle very often uses  
it for a character upon which a moral judgment can be passed, and  
good characters are often called *qualified* than bad ones. In French, this  
has come to be the most familiar meaning; and it is very common in  
our other writers of our language. This is one of the innumerable instances  
which Aristotle has in the nature of expression we have in the that  
the meaning such or excellence, quality, can be used in logic to express the co-  
existence of opposite qualities of being affirmative or negative in  
predicaments are also said to have quality for degree of intensity, but was a scholastic dispute about  
the independence of which concerned qualities.



mental. When I exclude that I pass my eyes over some marks  
 in it, clearly I must have had about some idea of a mind. If I  
 say it has instincts, I must already have the idea of instinct. For if the  
 animal were the only object which suggested that idea, I should not  
 be able to separate the idea from that particular animal; and if I  
 had not had any such separate idea I could not attribute, or even  
 judge it, of that animal. I must then have an abstract ~~idea~~  
 thought, an idea of instinct; and that that idea is applicable to thought  
 from my previous reflections, is applied to the thing I see before  
 me, — that is not soon, but is rather a theory to account for what  
 I see. In the same way is true in the case of every judgment. It is  
 not given in sensation, it is a theory of sense the sensor impression. Thus  
 in the case even with what are called qualities of sensation. I look  
 at a black stone. There is a direct sense of blackness. But if  
 I do judge the stone to be black, I am comparing this experience  
 with previous experience I am associating the sense of blackness  
 with the idea derived from former black objects. Thus I do, to say of  
 the stone to be black, I am making a little theory to account for the look  
 of it. Say the theory is quite empty, if you please; that is, that it is only  
 the impression thought over again. It will have been put into another  
 form of thought. It is in the way of a theory, but a theory is

The best way to think clearly is to think in usual language, rather  
 than in words, or artificial language. Suppose we were to compare iron with  
 one like gold, ~~very hard~~, ~~very easily scratched~~ but hard to work, the other a  
 glass like steel, hard to scratch but easy to break, does it make a dif-  
 ference of these qualities?



(Small handwritten notes and scribbles on the right margin of the page)

We see that in order to represent the relations of qualities to objects we must treat those qualities as objects to which the things are connected. In the above diagram (one or could not make it simpler while making it show the same relations) we have ten separate objects between which 12 lines are drawn. Three of the objects are things, gold and steel; two are the qualities, softness and brittleness; two are the intensities; and the remaining four, represented by black spots, are the facts.

When a quality is thought about as a distinct object, it is said to be thought abstractly, and is called an abstraction and nouns formed from adjectives and participles are abstractions. This is a great blunder in logic to compound an abstraction in this sense with the operation of precision, or separation in the position. Many thinkers of a "man" abstraction, imply, some degree of contempt. But thinking abstractly, in the sense of isolating characters and thinking them as distinct objects is the only way to think clearly and efficiently. Mathematics is only rendered possible by thinking in this way. Some persons have a notion that such thinking is false and false. It would be just as if they thought "softness" and "brittleness" are things in the same sense as chairs and tables are things. But if a chair or a table or a screw is a real thing, then softness and brittleness, what more? But the accurate fitting of the picture which holds the different pieces together for a while? Do you yoke me a chair or a table, is that whole motion, is looking at it or using it? At any rate, is not the important thing the connection of the chair and the table, the fact that we can think about it as a whole? If this be granted, we can think about the connection of experiences? If this be granted, is it of this same nature does not also belong to the words "softness" and "brittleness", but the former is very useful in the above diagram. We will that ability of abstraction is only a preparation to the higher, and more useful, ability of abstraction.