

Chapter 3

Division.

1. Introductory.

‘Division’ is a Mental Process, in which we think of a certain Class of Things, and imagine that we have divide it into two or more smaller Classes.

[Thus, we might think of the Class “books,” and imagine that we had divided it into the two smaller Classes “bound books” and “unbound books,” or into the three Classes, “books priced at less than a shilling,” “shilling-books,” “books priced at more than a shilling,” or into the twenty-six Classes, “books whose names begin with A,” “books whose names begin with B,” &c.]

A Class, that has been obtained by a certain Division, is said to be ‘codivisional’ with every Class obtained by that Division.

[Thus, the Class “bound books” is codivisional with each of the two Classes, “bound books” and “unbound books.” Similarly, the Battle of Waterloo may be said to have been “contemporary” with every event that happened in 1815.]

Hence a Class, obtained by Division, is codivisional with itself.

[Thus, the Class “bound books” is codivisional with itself. Similarly, the Battle of Waterloo may be said to have been “contemporary” with itself.]

2. Dichotomy.

If we think of a certain Class, and imagine that we have picked out from it a certain smaller Class, it is evident that the Remainder of the large Class does not possess the Differentia of that smaller Class. Hence it may be re- garded as another smaller Class, whose Differentia may be formed, from that of the Class first picked out, by prefixing the word “not”; and we may imagine that we have

divided the Class first thought of into two smaller Classes, whose Differentiæ are contradictory. This kind of Division is called 'Dichotomy'.

[For example, we may divide "books" into the two Classes whose Differentiæ are "old" and "not-old."]

In performing this Process, we may sometimes find that the Attributes we have chosen are used so loosely, in ordinary conversation, that it is not easy to decide which of the Things belong to the one Class and which to the other. In such a case, it would be necessary to lay down some arbitrary rule, as to where the one Class should end and the other begin.

[Thus, in dividing "books" into "old" and "not-old," we may say "Let all books printed before A.D. 1801, be regarded as 'old,' and all others as 'not-old'."]

Henceforwards let it be understood that, if a Class of Things be divided into two Classes, whose Differentiæ have contrary meanings, each Differentia is to be regarded as equivalent to the other with the word "not" prefixed.

[Thus, if "books" be divided into "old" and "new" the Attribute "old" is to be regarded as equivalent to "not-new," and the Attribute "new" as equivalent to "not-old."]

After dividing a Class, by the Process of Dichotomy, into two smaller Classes, we may sub-divide each of these into two still smaller Classes; and this Process may be repeated over and over again, the number of Classes being doubled at each repetition.

[For example, we may divide "books" into "old" and "new" (i.e. "not-old"): we may then sub-divide each of these into "English" and "foreign" (i.e. "not-English"), thus getting four Classes, viz.

- (1) old English;
- (2) old foreign;
- (3) new English;
- (4) new foreign.

If we had begun by dividing into “English” and “foreign,” and had then sub-divided into “old” and ” new,” the four Classes would have been

- (1) English old;
- (2) English new;
- (3) foreign old;
- (4) foreign new.

The Reader will easily see that these are the very same four Classes which we had before.]