

numbering and measuring from an epistemological viewpoint

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75-76 ÉNUMÉRER, MÉMOIRE, ACTES, ORDINAUX

Numbering is a procedure based upon our finding ourselves capable of **retaining, in our memory, the sequence in which acts of consciousness successively occurred in time**. We may consider numbers initially to be a series of arbitrarily chosen symbols, for which we fix only a certain kind of succession as the lawlike or – as it is commonly put – the “natural” one. Its being termed the “natural” number series was probably connected merely with one specific application of numbering, namely the ascertaining of the *cardinal number* of given real things. As we throw these one after another onto the already numbered heap, the numbers follow one another by a natural process in their lawlike series. This has nothing to do with the sequence of number symbols; just as the symbols differ in different languages, their sequence too could be specified arbitrarily, so long as some or another specified sequence is immutably fixed as the normal or lawlike one. This sequence is in fact a norm or law given by human beings, our forefathers, who elaborated the language. I emphasize this distinction because the alleged “naturalness” of the number series is connected with an incomplete analysis of the concept of number. The mathematicians term this lawlike number series that of the *positive whole number*.

The number series is impressed upon our memory extraordinarily much more firmly than any other series, which doubtless rests upon its much more frequent repetition. This is why we also prefer to use it in order to establish, through association with it, the recollection of other sequences in our memory; that is, we use the numbers as *ordinal numbers*.

77 COMPARER LES PLACES (ORDINAUX), PAS LES TAILLES (CARDINAUX)

According to the foregoing discussion, **each number is determined only by its position in the lawlike series**. [...]

We shall call the numbers which follow a given number in the lawlike series *high* than that one, and those which precede it *lower* [footnote: At this stage I still **avoid greater and smaller**; this distinction more suitably attaches itself to the concept of cardinal numbers – of which later].