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THE RELATIONS BETWEEN THE VARIABILITY OF ORGANISMS AND THAT OF THEIR CONSTITUENT ELEMENTS.

IN a study of the varying forms of organisms we may either direct our attention to the variability of the organism as a whole, or to the variability of its constituent elements. When two organisms differ in form, their differences are necessarily founded on differences in the forms of their corresponding parts, and we are justified in assuming each of these parts as very small. The corresponding parts may consist of homologous cell groups, of individual cells, or of other small homologous elements of the two organisms. These small elements may differ in size and form, and new elements may also be added in the one or the other organism, so that there may also be a difference in the number of elements. The difference between the two organisms may then be considered as a resultant of the differences between their constituent elements. Therefore, there must be a certain definite relation between the variability of the elements and that of the whole organism.

In order to make this clear we will, for a moment, consider the elements as independent units, not as parts of an organic whole. In this case, each element would be entirely independent of the other. When we consider two organisms thus con-