

## **Dichotomy and Homology in Geology**

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In all fields of natural sciences there are many indisputable examples of dichotomy when the whole on the lower level is divided only into two constituents. Whereupon one can find that the latter ones, being antipodal, are homologous and appear to be internally changeable in the same way. Precisely speaking dichotomy phenomenon includes the third component. But it is always suppressed quantitatively. The third component acts as a boundary or a border zone between the two main ones.

In geology dichotomy appears in all spheres: in tectonics, stratigraphy, palaeontology, etc. So, the earth crust is divided into continental and oceanic types. According to their characteristics they are homologous. On the lower level tectonically passive (cratons, thalassocratons) and active zones are distinguished in them. In their turn tectonically active zones in both types of the crust are represented by stress and strain structures. So, on three hierarchic levels we see binary structure of the earth crust.

Yu.S. Papin and A.I. Lezhnin consider that in stratigraphy natural segmentation of stratigraphic units into two ones on the lower level is one of the main principles of stratification. This is the principle of distratony, based on the natural structure of rhythm. It is formed by two (transgressive and regressive) facies sets.

The phenomenon of dichotomy has the fundamental role in the organic world as well, in particularly in classification of palaeontologic objects. There are Procaryota and Eucaryota, Bacteria and Cyanobionta, Phyta and Zoa, Protozoa and Metazoa, etc. On the level of types, classes and other taxons there are many convincing examples of bini-systematization.

As practice shows the cases of conflicting with the given principles are explained by jumble of hierarchic ranks, insufficient study, artificial separation of intermediate taxons.