

Did Social Circumstances of Researchers Delay the Acceptance of the Plate Tectonics Theory?

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Tomari (2008) concluded that it was ten years late that the Japanese geologists community accepted a plate tectonics revolution, and he had demanded the factor to social situation of a geologists particularly the researcher who had performed the field investigation and the describing the regional geological feature. On the other hand, Shibasaki (2011) tries criticism about the delay in the timing when use frequency increases of "the language of plate" that Tomari and Matsuda (1992) used as grounds of these "lost decade" from the standpoint of the methodological or sociological investigation. As for it, Tomari and Matsuda do not consider difference in onomastics by the difference between the community of geology and the community of seismology or geophysics.

The author think that there is not being wrong in a description of Tomari about the situation of the geologists community and the standpoints of individual researchers, and the scientific historic value of it is not reduced, but there is the thing which should be add for a conclusion of Tomari. It is a description about the processes of the PT acceptance in the inside of the individual regional geology researcher. The author came to think that the indication of Shibasaki about "the use frequency problem of the plate word" got a vital point from the experience of own investigation of regional geology and comparison of the methodology of the geology and geophysics or seismology.

Ikuo Hara (2008) introspected by a process of "the conversion" to own PT theory, and he made a stage before a regional geologist reaching the state that accepted PT theory. At first Hara divides PT theory into the section which explaining the origin of continent, ocean and its boundary (problem A) and the explanation that the tectonic development history of the outcrop and adjacent area which exist in front by PT theory (problem B). With that in mind, he thought with the acceptance of the PT theory if and when a geologist reached it for a stage of B.

Add it to these arguments, the author thinks that the following processes are necessary so that a geologist uses "plate word" in a regional geological description.

1. Internal acceptance of PT theory.
2. Re-think and re-investigation of own study field.
3. Re-interpretation of various datum.
4. Structuring the tectonic development history by using PT theory.
5. And the writing the articles.

Particularly, it takes very long time in process ② and ③, when the handling of the sample is include. In addition, it was severe, and the tradition of geology in Japan since Meiji Era as the descriptive science made individual researchers to mention to draw a sharp line between "an observation language" and "a theory language" and to use "an observation language" in a description of the geological observation. From the above, it is concluded that the delay of ten years of the PT theory acceptance that Tomari pointed out is an apparent thing.

References

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