

Living with Non-Spherical Earths: Co-Construction of Geodesists and the Concept of the Shape and the Size of the Earth

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This paper will argue how the practice of geodesy make the concept of the shape and size of the earth and the sociality of geodesists transformed, describing the genealogy of the practice and the contemporary situation of geodesy.

In science studies, scholars have presupposed that scientists are the group which share some attribution. For example, "the people who exercise their reason and explore the truth of the world", "the group who share the particular paradigm" and "the social group who share some interests." These presuppositions are introduced in order to explain how scientific knowledge is constructed and how they become taken for granted.

However, these presupposition interfere of the understanding how people transform the attribution of the objects for exploration and how people transform themselves by their exploration. Based on Actor-Network Theory, the anthropological theory which is proposed by Michelle Callon, Bruno Latour and John Law, I will propose how people change ontological status of objects and themselves, analyzing the case of geodesy.

The concept of shape and size of the earth is drastically transformed as time passes. In ancient Greek, people cannot perceive the whole entity of the earth and some philosophers made sophisticated reasoning and calculation system of the size of the earth. In contemporary period, artificial satellites perceive the entire figure of the earth. Some instruments even perceive the dynamics which human body cannot perceive. In the process, the sociality of scientists are also transformed; from librarian to data analysts of artificial satellites. This paper will describe a part of the history and will analyze the sociality of geodesists in contemporary Japan.

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