This doctoral thesis focuses on the trajectory of an agricultural plant biotechnology research group and its transformation into a university start-up company under the auspices of a major Finnish university, the University of Helsinki. The data applied in this study consist of 79 interviews and an extensive body of documentary material including scientific publications, research plans and reports, and correspondences. The qualitative analysis of these materials was informed by conceptual resources drawn from several theoretical approaches that have addressed science and the university organization in terms of work and practice (e.g., cultural-historical activity theory, ethnomethodology and symbolic interactionism). On the grounds of the empirical results so achieved, several generalized sociological theories purporting a radical change of science and the university institution are discussed.

The main body of the thesis is composed of four research articles, each analyzing a distinctive phase in the agricultural plant biotechnology group’s trajectory. The first article analyzes the construction of research objects in the laboratory and the transformation of experimental systems used at the early stages of the group’s research. The second paper relates to the social world perspective and investigates the complex organizational ecology of disciplines in the university department where the biotechnology group operated. The third paper makes use of the concept of boundary work and deals with the regulation of the emergent spin-off company at the university. Finally, the fourth article unites the empirical results and criticizes the Mode 2 knowledge production thesis and triple helix model of university-industry-government relations. Altogether, the thesis demonstrates the need to see science and universities as complex and contradictory entities whose development is shaped by multiple historical, political and cultural characteristics. It also substantiates the advantages that may be achieved when such developments are addressed in terms of the practice-oriented sociology of science vis-à-vis such generic models as Mode 2 knowledge production, the triple helix of university-industry-government relations, academic capitalism and the enterprise university.

Avainsanat-Nyckelord-Keywords
sociology of science - research work
science - agriculture - biotechnology
organization - public administration - universities

Säilytyspaikka-Förvaringsställe-Where deposited

Muita tietoja-Övriga uppgifter-Additional information