

Environment, risk and susceptibility in the Environmental Genome Project

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Genomics, gene-environment interaction and genetic susceptibility have achieved prominence in many scientific disciplines in particular in toxicology and epidemiology. The data that emerge from fields such as toxicogenomics, environmental epigenetics co-shape both our understanding of environmentally associated diseases and concepts of environmental risk management. Yet, from a perspective of STS, few research has been conducted on the effects of genomic knowledge upon the field of environmental health.

Based on publications related to the 'Environmental Genome Project' (EGP), I examine the emergence of new research objects such as 'environmental response genes' in the wider context of environmental health and epidemiology. I am asking for the modes of genomic data generation, mobilisation and translation processes – from microarray technologies to envisaged applications in environmental science and public health: With the shift of focus from 'exposure' to 'predisposition', exposure reduction seems to be no longer the main point of reference in prevention discourses; rather the 'high risk individual' emerges as to be protected from an 'intrinsic' susceptibility to environmental exposure. By mapping the discourses surrounding the EGP, I will trace these transformations and follow the changing signification of key terms such as 'environment', 'risk' and 'susceptibility'. A particular focus will be given to key analytical categories ('race'/ethnicity' and 'sex'/gender') as they are applied in the epidemiological study of gene-environment interactions.