New Representational Spaces Programme

Synthesizing project: Signification and experiment in Art and Genomics

Dr. Miriam van Rijsingen
Faculty of Humanities, Universiteit van Amsterdam

Research aim
This synthesizing project pursues the issue whether there is a theoretical ground for the thesis that art and genomics explore and develop common grounds of representation and signification and are therefore able to learn from each other.
In order to understand the conditions of representation in both bio-genetic art and genomics, this project includes a study of the role and function of imagination, experiment and method, language, information-technology/informatics and cybernetics in both bio-genetic art and genomics. Furthermore, the project will describe and analyse (philosophical and cultural) themes and aspects that occur in both bio-genetic art and genomics, such as time and space, scale and perspective, material and metaphor, identity, expression and experience.

Theoretical backgrounds and conceptual tools This project draws on research from different disciplines, in particular the research of Hans-Jörg Rheinberger (molecular biology and history of science) on experiment and the signifying practice of the (genetic) laboratory, Katherine Hayles (chemistry and literature) on informatics, Donna Haraway (science studies) on the cultural signification of genetics and technoscience, Sarah Franklin (sociology) on the social and anthropological perspective of genetic research, and Suzanne Anker (artist), Dorothy Nelkin and Susan Lindee (artists/cultural studies) on the role of the icon and metaphor. The point of departure of this project is the "fuzzy" concept of the *gene,* that allows for an enquiry into its operational potential (Beurton et al. 2000). The definitions of what a gene is are still in flux. The epistemic tension that emanates from this 'vagueness' is not necessarily a negative, but more likely a productive power in experimental scientific research. Two further concepts will guide this enquiry: 1) the concept of *Representation as practice* and 2) the concept of *Life (itself).* 1) Many

authors use the concept of *representation as practice* to emphasise the productive and context-bound character of representation in research. One of the aims of Rheinberger (1992, 1997), for example, is to reconstruct genomics research as representational practice through an analysis of the function of specific (and changing) sign systems in the experimental practice of the laboratory. His conceptual resources are mainly taken from semiotics and epistemology. According to Rheinberger, new representational spaces are created through a collapse of nature and culture, matter and information (cf. Haraway 1997, Tomasula 2002). In this project these findings will be explored further in the specific field of visual representation, as Rheinberger already suggested in 1997. For art(ists) the concept of *representation* as practice in the visual field is (and has always been) fundamental (a.o. Kepes 1956, Anker 2001, Nelkin/Lindee 1995, Stocker/Schöpf 1999). Moreover, artists are considered as experts on the productive qualities of the visual, or how images produce knowledge (Stafford 1991). Focussing on the concept of *representation as practice* in bio-genetic art and genomics will help to delineate common representational spaces.
2) The concept of *Life* or *Life itself*, as Franklin (1993/2003) calls it, plays a significant and signifying role – implicitly or explicitly – in most scientific research. The question 'what life is' has profound philosophical implications, and is taken up by both 'hard' and 'soft' sciences. Schrödinger (1967) and Canguilhem (1989) serve as a point of departure for most who elaborate on the concept of *Life*. After the 1980s the concept of *Life (itself)* can be characterised by its double-bind: informed by both information-technology and an a priori objective that is inherently material (Franklin 1993/2003, Rheinberger 1997). The question is how exactly this double-bind changes the concept of *Life* and, in a more concrete sense, the perception of life. Genealogy can be taken as an example to elaborate on the fundamental re-conceptualisation of *Life* as a form of respatialisation (ars recombinatoria) and re-temporalisation (ars combinatoria). This reconceptualisation of *Life* involves re-naturalisation, in a manner that defies separation into 'real' versus 'imagined' life (cf. Haraway 1997). Artistic practices draw on and contribute to this re-conceptualisation in specific ways that need to be considered further, especially where bio-genetic artists play with the virtual and the real.

Practical research In order to complement the theoretical and analytical findings of this project, an experimental laboratory will be visited: *SymbioticA*, a research laboratory "dedicated to the artistic exploration of scientific knowledge in general, and biological technologies in particular", located at the School of Anatomy & Human Biology (University of Western Australia). This laboratory is specifically based on the idea of the productive possibility of a common representational space for art and (genetic) science.

Coherence and practical aim This synthesizing project both draws on and guides theoretically the PhD-projects. Moreover, it will provide *The Arts and Genomics Center* with the theoretical resources and concepts that it needs to develop into a theoretically sound and productive centre of information and exchange between art and genomics.