

What are bio-objects?

Bio-objects in the 21st Century: Cybrids and other species hybrids...

Our targets are bio-objects, loosely defined as biomedically produced life forms that challenge juridical, political, ethical and cultural ordering systems. We are interested in the processes through which these objects are formed. Thus, we trace – and this is a highly collaborative effort across Europe – what we call processes of ‘bio-objectification’ and the COST Action IS 1001 is called ‘Bio-objects and their boundaries’ (www.bioobjects.eu). By employing and developing a common framework for analysing various bio-objects and their patterns of circulation in scientific research, policy circles, research politics, bio-ethical debates and financial exchange, we hope to come up with solid findings, based on detailed knowledge on the national contexts involved and comparisons across objects, countries and contexts.

One common feature of bio-objects is that they challenge and disrupt cultural and social, and institutional boundaries. What are often the object of natural science and medicine no longer map what society thinks of as clear cut boundaries between living and non-living, human and animal, natural and artificial. In the scientific context, this is old news and very much business as usual. Transgenic animals are for example handled more or less as any other laboratory species. However, when these bio-objects enter other arenas, such as politics, ethics or media, the story is quite different. For this particular project (Riksbankens Jubileumsfond P10-0343:1), we are interested in some of the challenges faced by contemporary human stem cell research. In Sweden, this research is clustered in a handful of universities, with funding from national research bodies, increasingly with the explicit pressure to commercialise stem cell-based products or services to boost

the national economy. We want to find out what challenges this research produces for society. To this end, we approach a number of societal arenas, interviewing leading researchers, policymakers, university administrators responsible for stem cell commercialisation and bio-ethicists. Moreover, we investigate research proposals and research policy documents and study the media discourse in terms of press releases from universities and funding agencies and reporting in news media and popular scientific journals. The aim is to analyse how the bio-objects, in this case novel products in stem cell research, have different meanings in different contexts, and how this gets transformed in different societal sectors. By following a particular bio-object and studying its transformations and consolidations across various areas we aim to uncover the processes as they unfold. We also hope to add informed knowledge around some particular bio-objects produced in stem cell research, such as cybrids and induced pluripotent stem cells (iPSC).

‘Cybrid’ is a narrow term that we used initially, most easily defined as admixed embryos, with human nuclear DNA, but non-human derived cytoplasm. The creation of these science fiction like creatures was to help stem cell researchers develop new understanding of complex biological processes and develop therapies for patients within what is called regenerative medicine. We started out following the cybrid debate in Sweden, in media, politics and science. The main questions were whether the creation of chimbrids should be allowed at all, and how to best categorise them legally: as human, non-human, or as something in between? But then, they quickly fell in popularity, so to speak. Stem cell researchers instead



put their effort into developing iPSC, and other forms of human/animal hybrids and chimeras. We borrow the term ‘chimbrids’ from the FP7 with the same name, for a variety of inter-species mixes used today. Finally, we want to stress the methodological and theoretical advantage of being part of a wider network of European researchers through the COST Action, with competencies in a wide range of disciplines. In our own national project, we come from different backgrounds: sociology, ethnology and developmental biology; on advantages when it comes to understanding the multitude of challenges posed by contemporary human stem cell research.



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