

The Biopolitics of Cultured Meat: Environment, Food Imaginaries and the Future of Animal Life

Elisabeth Abergel

The impending commercialization of laboratory-grown meat, the artificial synthesis of meat and meat products via tissue-engineering, known as cellular agriculture, problematizes traditional forms of food production and agriculture. Biofabricated meats from stem cells, *in vitro* meat (IVM) will not only disrupt the meat industry and the way we consume flesh, but they will ultimately impact rural livelihoods and landscapes. Following the work of Waldby and Mitchell (2006) on tissue economies, which outlines the ways in which the accelerated circulation of living tissue fragments occurs in human reproduction and health, the work I intend to pursue while in Munich will explore the values and embodied power relations constituted in the creation and production of consumable animal tissues. The book will articulate how food, in this case meat, is being materially, ontologically and epistemologically reconfigured.

Because of the prominence of ecologically sustainable foods and food cultures that condemn industrial animal farming in public discourse, my aim is to understand the conditions and the contexts that make cultured meat technologically possible, socially and culturally acceptable, and ecologically necessary. My second aim is to analyze what lab-grown meat might reveal about future human/animal/nature entanglements. What makes this study relevant to the environmental humanities is the fact that the regeneration and materiality of cultured animal tissues remain understudied for non-medical uses. The development of this type of tissue economy, as consumable cultured cells, and its establishment at the intersection between the biology of bodily tissues and the kinds of technologies available to procure and study them, is also of interest from an STS perspective. IVM represents visions of desirable food futures and imaginaries (Jasanoff and Kim, 2015) fueled by sociotechnical innovations, social expectations (Brown and Michael, 2003) and ecological limits.

I start from the premise that animality cannot exist beyond its animal body or its morphological origin, thus questioning the very nature of IVM, be it beef, pork, chicken, turkey or fish. As such cultured meats can be understood as bio-objects. Bio-objects describe material entities that belong simultaneously in culture and nature, the products of life technosciences which challenge the social order, belonging to various social and symbolic categories (Tamminen and Vermeulen, 2012). Hence, issues such as the social significance of bodily fragmentation (Rabinow, 1999), bio-objectivation (Tamminen and Vermeulen, 2012) as well the moral and ontological ambiguity of cultured tissues (Abergel, 2015; Stephens et al., 2017), relate to the dematerialized/materialized configurations of what constructs meat as consumable flesh. The new materialism literature will provide some understanding about animalness and its substantiation from generic tissue fragments and about the experience of eaters of lab-grown meat (Bennett, 2010). Cultured meat is at the intersection of food and medical technologies. IVM blurs the line between therapeutic and nutritional tissues that can be personalized according to health requirements.

While the objectives of the *post-animal bioeconomy* are to disrupt the meat industry by producing clean, ethical and environmentally sustainable animal-free meat, the elimination of animal bodies in meat production leaves open the question of human-animal relations. While IVM compels us to think ecologically and empathetically with non-human others, does it actually stand for something other than its purported aim?