

# **GETTING OUR HANDS DIRTY**

## **Critical Engagements with Data in the Life Sciences**

### **Abstracts**

Colloquium

Friday, July 8<sup>th</sup> 2016

Zentrum für transdisziplinäre Geschlechterstudien (ZtG)

Humboldt-Universität zu Berlin

Unter den Linden 6

Room 2070a

*Sofia Varino*

## **Data Assemblages:**

### **Uncertainty & Vitality in the (Un)making of Celiac Disease**

My paper follows the trajectories of gluten as an active participant in the complex data assemblage of Celiac disease. Oriented by the concept of gluten as an actant (Latour) engaged in volatile relations that enable consumption, contact and contamination, I engage in a materialist analysis of gluten's autonomy and agency. I ask questions about data, matter and knowledge production in the context of everyday dietary practices alongside two current scientific research projects developing gluten-degrading enzymes and engineering gluten-free wheat crops.

The gluten protein chain, at the tail end of the protein chains present in grains like wheat, rye, barley and spelt, does not exist in older grains like oats, corn, quinoa and amaranth. Following the approach of theorists like Elizabeth A. Wilson, Jane Bennett, Donna Haraway and Bruno Latour, we can thus understand gluten as an alloy, an impure object, a hybrid assemblage of biological meanings assorted with economic, political, cultural, aesthetic, and ecological ones, capable of participating, acting, intervening autonomously in the social sphere, with self-organizing and disorganizing capacity, not entirely peptide chain nor food additive, not only allergen but also the chewy, sticky substance that gives pizza dough its elastic, malleable consistency. Therefore, gluten is not only a biological entity, and it would be incorrect to presume that it is inert or incapable of political agency. Following the geographic, historical and social trajectories of gluten, my paper is a case study of the tricky, slippery capacity of matter to resist and participate in processes of scientific knowledge production.

**Sofia Varino** is a Ph.D. candidate in cultural studies at the Department of Cultural Analysis & Theory at Stony Brook University in New York. Her research areas include critical histories of the life and health sciences, material and posthuman feminisms, biopolitics and political ecology. She is also an independent curator of video and performance, co-founder of WOMAN WITH A MOVIE CAMERA and associate director at Harmattan Theater, an environmental collective based in New York City.

Magdalena Górski

### **Posthumanism and Intersectionality: On Developing Materially Agential Analysis**

Intersectionality as an analytical (and political) concept is usually not discussed in relation to posthumanism or material agency. In this presentation I will argue for the importance of conceptualizing and working with intersectionality as a material-discursive tool for analyzing power dynamics as they are enacted materially. By analyzing *The True Cost of Coal* poster developed by the activist art group Beehive Design Collective, I will discuss why it is important to engage with human and nonhuman material agentiality as constitutive forces of intersectional power dynamics.

**Magdalena Górski** is a Ph.D. candidate at the Department of Thematic Studies: Gender Studies, Linköping University, Sweden. Her forthcoming dissertation entitled *Breathing Matters: Intersectional Politics of Vulnerability* engages with breathing as a non-reductive transformative phenomenon that challenges anthropocentric understanding of human, politics and ethics while enabling anthropo-situated interventions in a posthumanist manner. She is also a founder of the Breathing Matters Network.

Lotta Fiedel

(for the GeUmGe-NET Study Group)

## Configuring Gender in Environmental Health Research

A systematic consideration of gender inequalities in environmental exposures and their health impacts is still missing. Contrary to gender theorized as a multidimensional, context-specific category that changes according to time and place, a homogeneous dichotomic category measured by a single check box is often used in research. The research network GeUmGe-NET (“Geschlecht – Umwelt – Gesundheit”), funded by the Federal Ministry of Education and Research in Germany, aims to systematically evaluate the current state of knowledge, underlying concepts, and methods used in research on sex/gender and environmental health and to develop interdisciplinary approaches to integrate theoretical concepts of sex/gender into environmental health research. Researchers from environmental epidemiology (Helmholtz Zentrum München, German Research Center for Environmental Health), toxicology (German Environment Agency (Umweltbundesamt)), environmental medicine (Bielefeld University), gender studies (Humboldt-University of Berlin), public health, and social-ecological gender research (University of Bremen; coordination of GeUmGe-NET) constitute the network.

In my talk, I will first summarize the state of gender knowledge in environmental health research. I will then focus on the question how *environment* is defined in the involved disciplines of health sciences and compare it with the understanding of *context* in Gender Studies. The questions I want to discuss are: How is the often implicit concept and measurement of environment related to the underlying concept and measurement of gender? How can gender be integrated in environmental health research beyond a simple “factorization” but as social and dynamic environment itself? What are the resulting challenges for Environmental Health as well as for Gender Studies?

**Lotta-Lili Fiedel** (Dipl. Psych.), research assistant in the working group *Gender & Science*, Humboldt University Berlin and member of the research network GeUmGe-Net. She is interested in the intersection of life sciences, especially clinical psychology, and gender studies.

## “Depends on who’s asking’ – Sex/Gender in Empirical Research”

While the current discourse in social and natural sciences indicates that a binary sex/gender classification may not present a satisfactory method of describing the sex/gender aspect of human variability, the preferred approach to sex/gender operationalization in empirical studies involves the labeling of participants’ sex/gender as “female” or “male” (F/M variable). The sheer multitude of studies that use variations of F/M variables suggests that there is an implicit agreement among many researchers what sex/gender is and that a binary variable assesses some form of sex/gender. However, scientific publications rarely disclose which sex/gender conceptualizations, definitions, and operationalizations their use of sex/gender categories entails. Hence, it can be hypothesized that – across and within their respective roles – researchers and participants do not share mutual concepts of sex/gender in general and of “male” and “female” (and other categories) in particular.

My dissertation project focuses on the construction<sup>1</sup>, assessment and utilization of sex/gender in psychology, neuroscience, medicine, and related empirical sciences. It employs quantitative, qualitative, and experimental methods to investigate current sex/gender conceptualizations and to explore alternative assessment strategies that begin to incorporate LGBTQI\*<sup>2</sup> perspectives, aspects of intersectionality, interdependency, and privilege. In the workshop, I will introduce findings from the first phase of the project, which involved surveys of research and participant experts.

Specifically, my presentation addresses the question of why researchers assess sex/gender in their studies. In an online survey, sixty-five international researchers from a variety of disciplines shared the purpose sex/gender serves in their studies and gave insight into their rationale for sex/gender assessment. Results indicate that sex/gender assessment is often driven by motivations other than specific sex/gender-related research questions. For example, institutional and structural conventions of scientific culture (e.g., publication requirements) may lead to a default inclusion of sex/gender variables. Results also indicate that “sex/gender” variables can serve different purposes, for example, as descriptive, explanatory, moderator, or outcome

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<sup>1</sup> I use terms related to the word *construction* from the perspective of the field of psychology, specifically social constructivism and social constructionism – a perspective that proposes that “the terms in which the world is understood are [...] products of historically situated interchanges among people” (Gergen 1985: 267). In psychology, the word *construct* loosely refers to a concept. *Deconstruction* refers to the analysis of parts of these social processes and products of construction.

<sup>2</sup> LGBTQI\* is a commonly used initialism that stands for Lesbian, Gay, Bisexual, Trans, Queer, Intersex. Here, the asterisk represents persons who may not be defined by these initials but do also not identify as heterosexual cis-persons. Here, *cis* refers to a subjective congruence between birth-assigned sex and the sex/gender-related identity labels, roles, norms, etc., a person has adopted and/or been socialized with.

variables. I propose that reflecting on the purpose, relevance, and context of sex/gender-related data is one of several important steps in the development of non-binary approaches to sex/gender assessment. By clarifying why sex/gender-related variables are of interest in a specific study and which purpose sex/gender operationalizations serve, researchers can reevaluate their sex/gender-related hypotheses and develop context-driven definitions and operationalizations that have the potential to yield more meaningful data than traditional F/M operationalizations.

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**Diana Schellenberg** is a PhD candidate from Berlin, whose general research interests include the role of scientific processes in the maintenance of social power dynamics. Diana's dissertation project focuses on the construction, assessment, and utilization of sex/gender in psychology, neuroscience, medicine, and related sciences. It investigates current sex/gender conceptualizations and operationalizations and explores potential alternatives to categorical assessment strategies. Diana obtained a diploma in Psychology at Freie Universität Berlin and is currently affiliated with the Department of Educational Psychology, Technische Universität Berlin and with the Center for Transdisciplinary Gender Studies, Humboldt-Universität zu Berlin.

Victoria Pitts-Taylor

## Queering the neurobiology of kinship

Social neuroscience has recently shifted the biological focus on kinship from immutable genes to neural systems underpinning social bonds. In the neuroscientific story of kinship, humans and other mammals are able to experience bonds of belonging through the involvement of neural systems, with the neurohormone oxytocin playing a key role.

I address oxytocin research that explores its role in attachment, defined as “the dispositions to extend care to others, to want to be with them, and to be distressed by separation.” This focus, I argue, addresses what queer theorist David Eng calls *affective kinship*. Unlike legal kinships, or even cultural kinships, affective kinships, Eng says, “belong to everybody.” The neuroscientific literature on oxytocin remains tied to an image of kinship as comprised of nuclear, heterosexual relations, underpinned by sexual dimorphism. Here, I briefly introduce oxytocin research and explore its heteronormative underpinnings. But even as I describe the heteronormative problems of this research, I also underscore what it says about the embodied and affective character of kinship, and to open up this research to relations that surpass heteronormativity and traditional modes of reproduction.

**Victoria Pitts-Taylor** is Professor of Feminist, Gender & Sexuality Studies, Science in Society and Sociology at Wesleyan University. She is author of three books, including *The Brain’s Body: Neuroscience and Corporeal Politics* (Duke University Press 2016).

## **Gender\_Race and privilege:**

### **Situating neuroscience research in the politics of power**

Positioning one-self within neuroscience paradigms, like many natural sciences, is unusual. It is even given no thought, and requiring it would be seen as irrelevant and unnecessary. Scientists begin their research from the premises that their hypothesis is neutral and informed by honest observation. Nevertheless, it is obvious to the trained observer that science is a political enterprise, and that doing neuroscience research is value driven; dictating what questions/results are deemed important, who has access to what resources, including which and whose results become highly esteemed in informing and leading the direction of the field (Harding 1989; Chalfin/Murphy/Karkazis 2008). Social categories play a significant role in neuroscience theorizing, in their construction as biological 'things' which neuroscience theorizing could 'capture' and hold stable for examination. For one, Black feminist scholars, critical scientists, feminist researchers, and post-colonial theorists have long established the fact that gender and race are inseparable interdependent categories (Combahee River Collective 1992; Crenshaw 1995; Hill Collins 2000; Walgenbach et al. 2007; Hornscheidt 2016). These categories exist as a result of negotiations and assignments of power and privilege. It is therefore impossible for critical neuroscientists to evade the immense sexism\_racism pervading the theorizing and conceptualizing of mental difference (which has become somewhat normalized).

In my talk, I shall examine the signatures of power and privilege in neuroscience research taking a somewhat historical stance (looking back over my shoulder). In the context of dirt, my claim is that power and privilege create an inevitable background 'noise' i.e. that is, a sound 'other than the one being monitored'. So privilege and power in this context form the backdrop upon which neuroscience frameworks and paradigms are grounded – remaining unnamed and unquestioned, even unnoticed, taken for granted as the usual norm. I will attempt to thematize this inevitable 'contamination' of data.

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*Margrit Shildrick*

**Body Shock: unsettling the biosciences through postconventional materialities.**

My presentation will engage with a variety of data around a supposedly single biomedical event, that of heart transplantation. In conventional discourse, organ transplantation constitutes an unproblematised form of spare part surgery in which failing biological components are replaced by more efficient and enduring models. The procedure is heavily monitored for years afterwards during which a variety of biological, immunological, and pharmaceutical data are collected and evaluated, with the success of the operation gauged against the clinical recovery of the recipient as determined by those measures. But once that simple picture is complicated by attending to issues such as the historico-cultural context, temporality, the phenomenological sense of self, the psycho-social imaginary, and even disregarded biological dimensions such as cellular microchimerism, any biomedical certainty is radically disrupted.

Drawing on my own research into organ transplantation, I will seek to demonstrate the dynamic interweaving of multiple data to produce a mutually constitutive assemblage of elements in which no one can claim priority.

**Margrit Shildrick** is Professor of Gender and Knowledge Production at Linköping University.

[margrit.shildrick@liu.se](mailto:margrit.shildrick@liu.se)