Shrugging off the Human Atlas: An Investigation in Somatic Normativity, Medical Imaging, Concepts of Bodies, and a Lack of Enablement in Empowerment for People who Grow Up and Old. (A.I.Stingl)

Medical imaging technologies continue to increase both general availability and the number of medical issues that they are used in. Common opinion in our optico-centric culture assigns to these technologies the role of highly effective tool to aid in diagnosing illness. In my recent work, it is argued that imaging technology has another and even more influential role in biomedical discourses and between science and its publics, transcending the diagnostic and research processes themselves. Imaging is in itself not just a gathering of data but a specific way of *ordering information* and thereby attains epistemological properties that make it a tool, a medium *and* a social actor at the same time. By conflating in these properties on the level of medical practice, imaging is revealed to be more than a passive application. With its agentic properties revealed, it becomes apparent that not only does imaging serve as a persuasive technology, it attains a constitutive nature that becomes at first increasingly defining of the doctor-patient relation, the idea of the body, of normalcy itself. Future potentials and discontents of imaging as a persuasive technology are found in regard to gender studies and to ageing , while medical practices and medical imaging technology invade everyday lifeworlds *(virtualization, medicalization)* as a part of the regime of Ambient Assistive Technologies (AAT). In order to cope, we must adopt an understanding of the limits of conceptualization and visualization for the *mindful* use of technology and create a pragmatic approaches towards an even more effective application of these technologies.

I have become increasingly skeptical when it comes to what has been called the *medical gaze* and the power it can have over forming, defining, and constituting rather than finding, detecting and diagnosing illness and health. In the dialectics of seeing that medical imaging is constituted by, the notion of narrative as a somato-normative force is shaping illness and health in (re)creating oneself along the lines of images and phantasms. Where the idea of narrative medicine has emphasized that the patient's individual and subjective experience of illness must be taken into account, I would like

to suggests that this narrative is qualified by a plasticity that allows images and phantasms to take hold of the patient's experiential landscape and reshape it for good or ill in locking the patient into a fixed plot through the deployment of metaphors and images that constitute narratives of their own. Women are, in particular, locked into mindsets (to substitute the notion of plot or narrative with the alternative Ellen Langer suggests), with regard to the process of ageing, by way of visual narrations. It is not just the patient himself/herself but it is every social interlocutor who will follow in the narrative when interacting with a patient based on how much or little they know of the plot. A specific illness or ageing (which, today, has become socially reconstructed as a disease in between science and its publics) narrative exists only once a patient, or an interlocutor, has actually decided on a narrative. Recent narratology theory argues that empathy (or empathic action) is best constructed as narrative empathy, and that decision-making is reconstructed within this frame, whereas media-theory suggests that because of inherent epistemic deficiencies of the combined function of serving as tools, media, and social , it must be accepted visual/medial narratives are have a “propaganda”-like effect on narrative decision-making. From a feminist perspective, we could argue that, though not exactly coercion, persuasion via visual narrative is, therefore, an act of violence in general, and that this violence is performed through the use of imaging technologies, when they are employed to persuade inter-actants to reaffirm gender categories.

Following the suggestions of Merleau-Ponty , Judith Butler still one of the seminal and prominent of references in the discourse that states that sex and gender are produced through (language) performances, reintroduced the idea that bodies are possibilities but that, at the same time, the (linguistic) performative conditions constrain and predetermine these possibilities: The notion (and its discontents), the declaration “It's a girl”, when a baby is born, sets in motion a series of performative actions that will produce the gender identity of the child, has certainly pervaded our public arena or at least the (Kantian) public arena of scholarly circles. However, in view of medical technologies, the production of gender identities and the “normalization” of the child's body starts much earlier (see recent work on the biology of the body and gender by Fausto-Sterling, Grosz,

Irigaray, myself) and condensates unto the point of birth through the use of pre-birth imaging. Commonly, the (normative) declaration „It's a boy“ is first uttered by a doctor upon the use of ultrasound imaging. In ultra-sounding out the body of the fetus, doctors are defining gender by use of a persuasive technology (gender studies, feminist reading). The binary logic of male/female (or ternary: [male/female]/unmarked) gender categories is affirmed through the use of ultrasound as a diagnostic tool. Sure, one might argue that doctors might be trained to deal with the technology in a fashion that may allow for a larger set of differences in development. However, we would be entitled ask a few critical questions: How does this work in the actual situation? What does it mean, empirically, if a doctor cannot tell the gender from a picture, or if s/he sees androgynous or hermaphroditic properties in the picture? In general practice, these become treated as “abnormalities” based upon the imaging technology which functions as the first and primary social actor in the construction of sex and gender. And this exceeds the realm of babies (development is a metaphor for youth, as opposed to ageing, and something that is also encoded in visual regimes). Gendering therapeutic and diagnostic regimes and producing the gender of the subject of biomedical research and intervention is highly common: Studies on the question of trust in online trade claim to “show” differences in “only two types of brains”: male and female. Imaging technology persuades its interlocutors that there are basically only these two types of brains. To my knowledge, feminist critique – despite vast theoretical work (as early as Rosi Braidotti in the late 1980s) on imaging, sex and gender, and recent studies on empowerment - has yet to catch up with technological development in medical imaging and with the recent suggestion that empowerment alone is not enough, that a different concept of *enablement* is now being discussed in social theory and that new ideas of what it means to be “able” emerge from within the ill-coined field of disability studies (which affects our ideas about ageing). The concept of persuasive technology may just help to facilitate this very necessary step in accounting for the uses and consequences of medical imaging technology in contemporary and future society.

While we do not yet have the technological capabilities to produce images of the insides of human

bodies everywhere and at every time, we must take notice of the fact that an increasing number of pictures of our bodies are being produced under normative constraints – the *transparent body* in the *cyborg gaze* (A. Prasad, J. van Dijk, K.Joyce) – of the knowledge regimes the technologies are embedded in, such as exemplified in the super-simplified male/female brain distinction in neuro-economics. We can imagine scenarios of a society that we may actually live to *see*, where all of our food is enriched with contrast solutions, ambient technologies in our homes and public buildings take measurements and create images from the data, and biomedical interventions happen all the time. Images of our body may be created and used all the time and we may try and reshape our bodies through and because of such images. There are caveats, though, for this may lead to a new form of the medicalization of society turning into the hypermedicalization of society, by realization of the fact the no-body matches the "ideal-type" that comprises the information order on which the images are rendered from the data. Unlike a salutogenic paradigm, the prevalence of imaging technology reinforces the pathogenic paradigm, that affects above all the medicalization of ageing, which, in turn, has been narratively "gendered to the core". What I am arguing for is that we must accept the severe limits of our understanding of the human body, ageing, ability, and the effects of the social and environmental systems it is embedded in. We must, instead challenge our contemporary understanding of normalcy, health, disease, and ageing. *Mindless* acceptance and use of medical knowledge regimes and imaging technologies invigorates their persuasive power. The point is, respectively, not that we throw overboard modern medicine, its technologies and its future promises – as some extreme critics would like us to – nor should we simply take it at face value – as some proponents suggest, who view Western medical science as if it was a religion-like road to salvation. The first step towards the realization of an improved relation with technology is to understand how imaging technology actually functions as a social actor, and, therefore, to accept that medical images are never entirely objective or innocent. We need to try and be mindful of the hidden powers that technologies wield over our narratives of ageing, sex and gender. This is the project I suggest to undertake.