**Invisible Information Infrastructures – problems of scale vs structure**

Sarah Kember

This chapter examines the compatibility between academic and industry accounts of multi-scalar media that are imperceptible and/or indifferent to human intervention. Multi-scalar media range from algorithms and databases to so-called “smart” objects, environments and materials that are seen to exist as things in themselves, beneath and beyond the reach of human-centric knowledge and agency – knowledge and agency that has been absorbed and superseded. Post-humanist, post-critical accounts of a multi-scalar world that just is (that is ontological, or just there) are not only consistent with Google tales about neutralized, data-connected subjects made mute by their interaction with unmediated, gestural environments; these accounts are also inconsistent with themselves. Where, for example, are they coming from? The chapter will expose the masculinist disembodied knowledge practices, the god-like views of every invisible thing from nowhere that re-surface in the shift from structure to scale and from epistemology to ontology (Haraway). In contexts of ubiquity oriented to the increased ‘luminosity’ (Deleuze) of women – including gender estimation algorithms in face recognition technology, sex apps for Google Glass and the development of wearables such as Microsoft’s smart bra – I will offer a feminist post-dialectical critique (epistem-ontological, material-discoursive, post-human where post does not mean after and by no means either negative or affirmative) of the elision of critical interventionism. In these contexts, where infrastructural agency and determinacy are enmeshed with sexism, misogyny and discriminatory sorting, a resuscitated critique remains tied (as Andrejevic suggests) to incompatible counter-narratives and to the sense that algorithms that do not write themselves can be re-written. A feminist post-dialectical critique that incorporates structure and scale as constitutive outsides reintroduces antagonism (Mouffe) and makes possible a politics of multi-scalar media and invisible information infrastructures.

The first section of the chapter will focus on industry and academic accounts of multi-scalar media that are far from antagonistic or even agonistic – adversarial. Here I will offer ‘’GOOOgle” as a fictive entity or totality that incorporates Object Oriented Ontology and specifically the fantasy of a flat ontology. According to Ian Bogost, a flat ontology of multi-scalar things (things that just are) cannot be written. Where writing is, he suggests, at odds with worldliness, the list, inventory or catalogue evinces ‘the abandonment of anthropocentric narrative coherence in favour or worldly detail’ (41). Bogost’s list is unmediated, not authored but existing, not language but things. I will offer my own list (smart phone, smart watch, smart bra, smart glass, driverless car, drone, robot, avatar, algorithm, database, sensor, actuator…) as something both authored and incomplete. It will pick up on the current cataloguing of smart objects, environments and materials that like driverless cars and see-through phones just are/coming soon. My list will intersect with Google’s account of the very near future:

Your apartment is an electronic orchestra, and you are the conductor. With simple flicks of the wrist and spoken instructions, you can control temperature, humidity, ambient music and lighting. You are able to skim through the day’s news on translucent screens…You grab a mug of coffee and a fresh pastry, cooked to perfection in your humidity-controlled oven…Your central computer system suggests a list of chores…It further suggests that, since your coffee supply is projected to run out next Wednesday, you consider purchasing a certain larger-size container that it noticed currently on sale online. Alternatively it offers a few recent reviews of other coffee blends your friends enjoy.

(29)

Google’s prediction, of a day in the work-life of a neutralized citizen is casually sexed (breezing by the traditionally female connotations of kitchens, chores, consumption and coffee mornings) while Bogosts’ disavowal of writing and story-telling (including his own) is, I will argue, casually sexist, concerned with listing as metaphysical man-talk and content with the world and all its iniquities, just as it is. GOOOgle, incorporating Object Oriented Ontology is a fictive fantasy of things and futures that write themselves. Here, in a recourse to I-less imediation (where ‘i’ means internet, intelligent, invisible, information, infrastructure in a list that is both open and closed) replete with objects but devoid of subjects, we witness a return of the repressed – the masculine subject of disembodied knowledge.

The next section of the chapter investigates contexts of ubiquity – of ambient intelligence and smart environments – oriented to the increased luminosity or visibility of women enrolled in what Angela McRobbie refers to as a ‘new sexual contract’ – more visibility but with less of a voice (McRobbie). I will argue that women are triply ubiquitous in contexts of ubiquity: everywhere, everyware (co-constitutive of the technologies through which they are both being and becoming) and everywear (the highly visible focus of future wearables). Everywear technologies demonstrate both visibility and voicelessness, the undoing of feminism through ironic forms of sexism and illusions of equality. A sex app for Google Glass (RIP?) makes a promise of equality undermined by a focus on heterosexual couples and is marketed through sexualized photos of women. A spin-off from the health-oriented Microsoft smart bra, a so-called ‘chastity bra’ that, working through a combination of sensors, algorithms and apps pops open only when your prince has come is presumed ok because it is jokey. Everyware technologies – defined by Adam Greenfield as ‘ever more pervasive and ever harder to perceive’ (Greenfield) – such as face recognition are involved in the discriminatory sorting of male and female, black and white, old and young, using one generic sorting algorithm to recreate hierarchical structures of identity in lieu of the failure of such systems to deal with scale, to pick out the face of a criminal/consumer in a crowd. There is nothing flat in the list of faces of interest to security and commercial organizations. The algorithms that write these faces (Principal Component Analysis and Linear Discriminant Analysis), literally recreate orders of identity out of the chaos of ambiguity. They bring forward very familiar ways of seeing and knowing based on nineteenth-century photographic codes and specifically, the mug shot. Already written in to a history of disciplinary photographic practice that is classed, raced and gendered, they do not write themselves. They are governmental but far from deterministic, agential but by no means autonomous. As forms of software writing always in process of dealing with system failure and performance critique, they remain open to rewriting and to forms of critique more oriented to politics than performance.

The final section of the chapter will elaborate this critique with reference to a post-dialectical, rather than post-feminism, one that holds in permanent tension both epistemologies and ontologies, structures and scales, retold stories and lists. Post-dialecticism or non-compliance with academic compliance retains a hold on the possibility of wording as reworlding (Haraway). It recognizes that rewriting the sorting algorithm from male/female to female-male matters because faces as things in themselves do not exist and are not fixed. In creating the indeterminability of things with respect to binaries and making space for anatagonism, critique after critique includes intervention in the list of invisible, information infrastructures.