Why feminist technoscience and feminist phenomenology should engage with each other: on subjectification/subjectivity

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Abstract
Feminist technoscience and feminist phenomenology have seldom been brought into dialogue with each other, despite them sharing concerns with subjectivity and normativity, and despite both of them moving away from sharp subject-object distinctions. This is unfortunate. This article argues that, while differences between these strands need to be acknowledged, such differences should be put to productive use. The article discusses a case of school bullying, and suggests that bringing these analytic perspectives together enables and sharpens examinations of the role of subjectification and subject positions for subjectivity in the phenomenological sense; affectivity within material-discursive entanglements and constellations of humans and things, and as connecting the body, things and the world in specific ways; and normativity as enacted, lived and embedded in perception.

Keywords
Affectivity, embodiment, feminist phenomenology, feminist technoscience, materiality, normativity, subjectification, subjectivity

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Introduction

Feminist technoscience and feminist phenomenology have seldom been brought into dialogue with each other, despite them sharing concerns with subjectivity and normativity, and despite both perspectives emphasising the need to problematise sharp subject-object dualisms. This article argues that, while there are distinct differences between these strands of research that need to be acknowledged, these differences can and should be put to productive work when theorising subjectification/subjectivity in ways that take into consideration affectivity, the role of technology, embodiment and norms about bodies.

While my argument is general, I describe a case of school bullying presented by Lis Højgaard and Dorte Marie Søndergaard (2011). I discuss this case – the case of Marian – in order to clarify what the perspectives of feminist technoscience and some other science and technology studies (STS), on the one hand, and feminist (and other) phenomenology of embodiment, on the other hand, can bring to the analysis of it, and what combining these perspectives would add to it.

The overarching argument of the article unfolds in several steps. I start by presenting what I see as a recurring understanding of subjectivities/subjectivity and subjectification within some feminist technoscience and other STS. As an example of such work, I turn to Højgaard and Søndergaard’s narration of 12-year-old schoolgirl Marian’s situation, and to their discussion of what the subjectification analysis that they propose would help to achieve in the understanding of bullying. Further, I outline three features of feminist phenomenology of the embodied self as being-in-the-world that I see as promising in the discussion of productive tensions and the analytical benefits of bringing feminist STS and feminist phenomenology into dialogue with each other. I identify crucial differences between the strands, and show how they can help to understand Marian’s situation when combined. While feminist technoscience is particularly appropriate to bring out material-discursive subjectification processes, dynamic orderings and enactments of subject positions and objects, feminist phenomenology offers analytical tools for examining subjectivity from and as a first-person perspective of oneself as a self with an eye for the role of embodiment and normativity. I suggest that bringing these together can enable and sharpen examinations of several factors: the role of distinct subject positions for subjectivity also in the phenomenological sense; affectivity within material-discursive entanglements and constellations of humans and things; and normativity as enacted, lived and embedded in perception. Finally, I summarise the main benefits of combining these approaches.

Feminist technoscience, subjectification and subject positions

The importance of moving beyond sharp subject vs. object dualisms has been emphasised within feminist technoscience and other STS. Further, feminist technoscience has examined discursive and material aspects of ‘sociotechnical relations and processes of materialization [as] inextricably intertwined’, i.e. as entangled
(Åsberg and Lykke, 2010: 299), and has argued that it is necessary to examine how specific material-discursive entanglements co-produce the social, the technological and subjectivity (see Moser, 2006; Højgaard and Søndergaard, 2011; Johnson and Åsberg, 2017). Scholars have traced dynamic orderings of bodies, subjects and things, have examined material-discursive entanglements within for example medical and public health practices and have shown how specific subjectivities or subject positions co-emerge with them (see, for example: Lindén, 2017). ‘Subjectivities’, states Ingunn Moser, ‘are neither inherent intellectual capacities nor a social constructed core of identities in individualised, natural bodies, but positions made possible in material practices and relations’ (2003: 86). Further, she explains, the term ‘subjectivities’ is used to ‘emphasize that a subject position is not something one has, occupies or is structured into, once and for all, but rather a set of differently structured positions one moves between and is moved through’ (Moser, 2006: 377). Moser examines how rehabilitation discourse and practices work ‘to order bodies and subjectivities’, in a line of analysis in which persons and things, together (such as the Olav-and-his-computer through which he communicates), are understood as ‘the point of departure for subjectivity, for an “I” that comes into existence in relations and that is also composite and only partially connected’ (2000: 230; compare Haraway, 1985).

The focus on subjectivity and subject positions is also central in the analysis by Ericka Johnson and Cecilia Åsberg of how pharmaceutical advertisements, through pictures and texts, prescribe certain ways of becoming ‘a healthy subject’, and ways of holding ‘healthy relationships’ (2017: 95, 94). Johnson and Åsberg (2017) examine prostate drug advertisements and Alzheimer drug advertisements, and discuss how the pharmaceutical companies depict particular subject positions – such as that of a grandmotherly figure in the Alzheimer drug advertisement who can maintain cognitive function by taking the tablets and thus read her granddaughter a bedtime story. The pharmaceutical advertisements help to ‘create’ ‘healthy subjectivities’ and ‘relationships for the subjectivities, ones which are dependent upon the consumption of the drug, essentially saying “Do you want to […] read stories to your grandchild? Then take our drug”’ (Johnson and Åsberg, 2017: 101). As another example, Lisa Lindén (2017: 116) examines norms about mothering, and shows how ‘a caring mother subjectivity’ is enacted through pictures and texts in Swedish Gardasil (a commonly used anti-HPV vaccine) advertisements. Lindén explains that these advertisements offer specific subject positions, such as that of the caring and responsible mother. The advertisements and information leaflets sent home to parents of teenagers depict caring and responsible mothers as mothers who manage risk by ensuring that their daughters are vaccinated. Such mothers also support them emotionally so that the daughters can continue to live healthy lives. Again, normative messages are being sent, such as ‘Do you want to be a caring mother? Vaccinate your daughter’. As a third example, Else Vogel (2017: 171) studies how a ‘normative registry’ is enacted in mindful weight-loss courses in which participants are encouraged to learn to recognise their hunger, to reflectively consider what they ‘really’ hunger for, to focus
on and think about nourishment and to become sensitive to which types of nourishment – and this word is used in terms not only of food but also of life more generally – give purpose and joy. Vogel (2017: 169) examines the ordering of subjects, bodies and everyday life practices, as a process that requires ‘active associating’, such as active engagement with inner ‘critical voices’, and an active positioning of oneself in relation to such voices.

To focus on subjectivity, as I read these examples, is to focus on how subject positions with/in material-discursive entanglements are enacted. Such a focus is also, at times, combined with an analysis of how specific subject positions are dynamically lived, reflected upon and questioned (Moser, 2006; Vogel, 2017), which often requires engagement with first-person narratives. Further, however, Højgaard and Søndergaard have called for a renewed theorisation of subjectivity, which should emphasise ‘the multiplicity of enacting forces’, and acknowledge ‘the subject as enacting along with objects as enacting’ and ‘objects as enacted along with subjects as enacted’ (2011: 349).

Højgaard and Søndergaard discuss STS, poststructuralist and agential realist (Barad, 2007) approaches, and emphasise the need for an examination of the diverse elements, forces and kinds of power that ‘produce and constitute situated individuals and subjectivities’ (2011: 349). They also ‘envision the inclusion of ‘the doings of materialities’ in [...] a de-essentialized, denaturalized subjectivity’ (Højgaard and Søndergaard, 2011: 348). Their work calls for explorations of ‘subjective enactments of normativities’ and ‘how normativities of socio-cultural categories work on, in, and through human beings; as well as how matter or materialities and technologies enact and are enacted in these processes’ (Højgaard and Søndergaard, 2011: 350, 340).

While Barad doesn’t give subjectivity understood from and as a first person perspective a central role in her agential realist approach, she underlines the need for an analysis of questions of ‘the nature of embodiment, subjectivity, agency and futurity’ (2007: 46; see also: Barad, 2014). Further, Barad’s approach is designed to shed light on the ‘role of human and nonhuman, material and discursive, and national and cultural factors in scientific and other social-material practices’ (2007: 26, emphasis in original). It is beyond the scope of this article to offer a detailed account of the agential realist approach. However, a few comments on Barad’s notion of intra-action and the understanding of the human as part of material-discursive entanglements are apt, since these have been central to some feminist technoscience works/STS on subjectivity (for examples of work that, like Barad, combine feminist technoscience with reasoning on subjectivity, see: Højgaard and Søndergaard, 2011; Søndergaard, 2013; Johnson and Åsberg, 2017; Johnson, 2019. For a critical discussion of Barad’s agential realist approach and an argument for the need to ‘hold on’ to subjectivity as ‘capacity for experience’, see: Braunmühl, 2018: 223).

For Barad, ‘individuals do not pre-exist their interactions; rather, individuals emerge through and as part of their entangled intra-relating’ (2007: ix). She coins the notion of intra-action in explicit contrast to that of interaction, which, in
her vocabulary, ‘presumes the prior existence of independent entities or relata’ (Barad, 2007: 139). To think with the term of intra-action is a way to focus on the dynamics of forces and factors in specific material-discursive entanglements. Further, different ‘intra-actions’, and different inclusions and exclusions within the specific practices, ‘produce different phenomena’ (Barad, 2007: 58), and presumed boundaries of subjects and objects are not taken for granted, but investigated. In this way, bodies and environment, for example, do not simply ‘take their place in the world’, nor are they only ‘situated in, or located in, particular environments; bodies and environment are instead ‘intra-actively co-constituted’ as ‘integral “parts”’ of, or dynamic reconfigurations of, what is’ (Barad, 2007: 170). We, Barad also adds, ‘are not outside observers of the world’, nor ‘simply located at particular places in the world; rather, we are part of the world in its ongoing intra-activity’ (2007: 184). Humans may or may not be involved in specific ‘material enactments’, but when humans are involved they are ‘part of the ongoing reconfiguring of the world’, ‘part of the world-body space in its dynamic structuration’ (Barad, 2007: 171, 172, 185).

Feminist technoscience is a rich and heterogenous field of inquiry. While acknowledging this heterogeneity, I see the following as central ideas in the literature above: subject positions along with objects are understood as enacted within and enacting specific material-discursive entanglements. Subjectification (at least often) refers to a dynamic co-emergence and co-constitution of subject positions/subjects and objects, and a rich diversity of factors and elements go into, help shape and are shaped in the subjectification process. Subjectivity – either in the plural when referring to emerging subject positions that the ‘I’ can occupy (Moser, 2006), or in the singular as a phenomenon co-constituted by discursive and material forces and with ‘constitutive effects on other enacting forces’ (Højgaard and Søndergaard, 2011: 349) – cannot be accurately understood in isolation from the technologies and material-discursive practices that help to shape it/them.

**Bullying: the case of Marian**

Qualitative studies of school bullying have identified self-blame, decreased self-esteem, feelings of abandonment, isolation, vulnerability, reluctance to tell adults and gradual turning-points in narratives of how bullying can diminish or stop (Berguno et al., 2004; Schott and Søndergaard, 2014; Tholander et al., 2020). Bullying contributes to episodes of anxiety (Carney et al., 2010), and victims of bullying can “retain the feeling of being vulnerable and alone, long after the bullying has stopped” (Tholander et al., 2020: 370).

Højgaard and Søndergaard (2011) engage with a case of school bullying in order to explicate their approach to the study of subjectification processes. They tell of a 12-year-old Danish girl, Marian, who used to belong to a group of popular girls in her class. After a heated argument with one of these girls, Marian started to receive text messages that told her that she was a ‘whore’ and a ‘rotten fish’. Over the following days, Marian was ignored by the other pupils in
the school, while receiving chat messages telling her that she was ‘going to die – now!’ (Højgaard and Søndergaard, 2011: 341). The messages were repeated during the following days, and some were sent by children whom she did not know. Furthermore, when Marian sought to defend herself online, the other children blocked her from their profiles on the ARTO website (a Danish website that they all used). After one month of repeated bullying, online and offline, Marian told her parents about the situation. The parents talked to the teachers, but the situation culminated when someone hacked into her ARTO profile and wrote ‘I have killed my cat’. Marian had recently lost her cat: she was mourning her loss, and now broke down. She eventually transferred to another school. We are also told that after Marian left the school, another girl was bullied in a similar way there.

When discussing Marian’s situation, Højgaard and Søndergaard emphasise the need for an analysis of the subjectification processes concerned with the ‘multiple forces: including discourse, matter, technology, subjectivity, etc.’ (2011: 348). They use Barad’s (2007) concept of intra-action, and state that the analysis of subjectification that they advocate implies a ‘redefinition of the concept of subjectification’ (Højgaard and Søndergaard, 2011: 349). This redefinition would emphasise ‘a simultaneous subjection and the ‘coming to subjective existence and agency through the intra-active enactments of a wide variety of non-human and human forces’ (Højgaard and Søndergaard, 2011: 349). They call for an analysis of ‘mutually constitutive’ factors and forces within subjectification processes in the bullying production. Further, they suggest that new formulations may be needed in order to capture the co-constitution and co-emergence. For example, they explain, ‘if a cell phone and a particular desire merge in the form of enacting forces and they enact a particular phenomenon of peer bullying among children, we may have to invent a new concept for this “cell phone-desire merger”’ (Højgaard and Søndergaard, 2011: 350). In a similar manner, a vocabulary for human–things entanglements might be needed in order to specify how ‘Marian – with her body language referring her to specifically gendered, ethnicized, classed and racialized positioning and situated in the practices of a specific school setting – was already constituted as a human-technological merger’ (Højgaard and Søndergaard, 2011: 351). Consideration of the human–thing entanglement, they suggest, may help to explain why Marian could not simply switch off the mobile when receiving hateful text messages:

By this enactment [of Marian as a human-technological merger] it became initially impossible for Marian to close down her accessibility in relation to the destructive and disintegrating subjectification effects, which were enacted by the discursive-technological mergers: the cell phone, the ARTO website, and the peer group normativities and dominating subjectification strategies (Højgaard and Søndergaard, 2011: 351).

Switching off her mobile, going offline, would have excluded Marian from ‘any intelligible subject position both in her understanding of herself and among her peers, their parents, and the teachers’ (Højgaard and Søndergaard, 2011: 351).
Højgaard and Søndergaard’s reasoning discerningly emphasises the importance of understanding the material-discursive as entangled in bullying production and performance. However, while we are told that Marian is profoundly affected by the situation, less is said about the ways in which she seeks to make sense of it, or what engaging with others and things in this situation means for her; for her sense of self and sense of agency in relations with others, things and the world. Further, while Højgaard and Søndergaard are concerned with the dynamic formation of subject positions and suggest that attention be paid to the ‘coming to subjective existence’ (2011: 340; see also: Søndergaard, 2013), less is said about the role of embodiment in this regard, or about what a cell phone–desire merger means for subjectivity from and as a first-person perspective. This is not strange; their aim is not to make a point about subjectivity from such an angle. However, explorations of the role of embodiment and affectivity for and in modes of being-in-the-world are central to phenomenology, and – I will argue – analytic angles from within feminist technoscience and feminist (and other) phenomenology could be productively combined.

Phenomenology of the embodied self

Phenomenological work has offered a radical move away from previous ways of conceptualising subjects and objects as strictly set apart, and I see three features of feminist and other phenomenological work on the embodied self as being-in-the-world are particularly helpful for the examination of benefits and tensions if phenomenology and insights from the work just discussed on subjectification are brought together.

Phenomenological work has shown how subjectivity cannot be accurately understood in isolation from others, things and the world that help shape it, or kept to the first-person – experiential – perspective. Subjectivity, in this perspective, is understood as ‘above all a relation to the world’ (Zahavi, 2001: 163). Further, when analysing embodied subjectivity, much feminist (and other) phenomenology of embodiment not only focuses on the subjective experiences of one’s body, but also explores the role of embodiment for subjectivity; how lived – singular – embodiment helps to condition and form one’s being-in-the-world. Emphasising both embodiment and situatedness, Maurice Merleau-Ponty describes bodily being with the French expression être au monde. The expression shares affinities with Heidegger’s formulation of the human being-there as being-in-the-world, but the French proposition à (in au monde) is additionally informative, and brings out and holds together orientation, direction and belonging, as noted by Jenny Slatman (2014: 553). Painstakingly, phenomenologists have moved beyond mind–body and beyond subject–object dichotomies in the understanding of embodied and embedded subjectivity. As Merleau-Ponty put it: ‘We have to reject the age-old assumption that put the body in the world and the seer in the body, or conversely, the world and the body in the seer as in a box’ (1968: 138). The body that I live is also the body that I have, and as a body I am part of the
world, oriented in the world (in some ways more so than others), and my bodily existence helps to shape my perspective on, and experience of, the world, without determining these. Central to this reasoning is a dynamic body–self–world relationship: subjectivity is understood from and as a first-person perspective of oneself as a self, and this includes the level of sensing one’s body – one’s heartbeat or breathing – as embodied, and, as stated earlier, as ‘above all a relation to the world’ (Zahavi, 2001: 163).

Phenomenologists have also studied emotions/affects as moving and touching us – as doing things – in reasoning where affects, as Thomas Fuchs puts it, are ‘modes of bodily attunement to, and engagement with, the lived world’ (2015: 2). Affectivity along the lines of Merleau-Ponty, for example, is understood to be interfused with perception in the lived experience; perception has ‘affectual roots’ (Cataldi, 2008: 168). Together, affectivity and perception ‘comprise our sensibility, our means or manner of opening on to a world we are already “in” or “of” (l’en-être)’ (Cataldi, 2008: 163; compare Merleau-Ponty, 2006). Affectivity is a dimension through which the world and things in it matter to us, and affect- edness says something about myself as a self – as a self I am exposed to, and am affectively in, the world (Fuchs, 2015).

Further, feminist phenomenology has analysed how normative cultural practices and structures of meaning situate different bodies in different ways, and how this helps to shape subjectivity, perception, choice and action (see, for example: Young, 2005; Feder, 2016; Zeiler, 2018). It has analysed how norms about bodies can come to be particularly deeply rooted in one’s bodily existence and co-existence through being repeated over time, and how these norms may be experienced as of-a-piece with one’s experience of one’s lived body (Zeiler, 2013; Wehrle, 2016). Normativity, here, is understood as lived, and, also, as embedded within perception. As Alia Al-Saji explains in her discussion of racism and normativity in and of perception, vision not only makes visible, it does so differentially according to sedimented habits of seeing – according to the tacit ways our bodies relate to and move in the world, allowing certain aspects of that world to be foregrounded and others to be backgrounded (Al-Saji, 2014: 138).

Differences and productive combinations

Just as feminist and other phenomenology moves beyond sharp subject–object binaries, so does the STS/feminist technoscience literature on the co-emergence of subject positions and things/subjectification discussed earlier. Further, from within at least some feminist phenomenology, subjectivity is understood as dynamically shaped in relations with the world and can be theorised as a situated dynamic and continuous becoming of the self (compare Shildrick, 2002). A dynamic becoming seems also central to analyses that investigate both ‘subjection’ and the ‘coming to subjective existence and agency’ (Højgaard and Søndergaard, 2011: 349).

Despite these similarities, differences are also apparent. First, much phenomenological work emphasises that subjectivity is always already thoroughly
relationally structured, and this on a bodily level. Central to such reasoning is the understanding of a basic openness of bodies: as bodily subjects, we are born into a world already inhabited, shaped and made familiar to us by others, and the familiar is both that which is given to us by others and that ‘which in being given “gives” the body the capacity to be oriented’ in specific ways, as Sara Ahmed (2006: 7) puts it. The embodied self as being-in-the-world is always already being-with others, affected by and affecting others, and the dynamic self-formation is not just the result of certain concrete encounters with others, but a condition of existence. Subjectivity is always already intersubjectively structured: the self is not understood as set apart from others and things as an independent entity. The phenomenological focus on dynamic self-formation as a condition of existence is different from but can be compatible with studies of specific subjectification processes in which subject-formation does take place.

Second, the phenomenological eye remains focused on first-person experiential dimensions. This is, of course, sometimes also the case in studies on the co-emergence of subject positions and things/subjectification – as seen above. However, strictly speaking, a first-person perspective is not necessary to ‘conceptualize the subject as enacting along with objects as enacting, but also to conceptualize objects as enacted along with subjects as enacted’ (Højgaard and Søndergaard, 2011: 349). At least, this is not the case if examinations of subjects as enacting are examinations that explore what subjects do, through observations, without engaging with a first-person perspective.

Third, one of the important contributions from analyses of subjectification and material-discursive orderings is the attention to socio-semiotic-material specificity. Such analyses have shown how humans and non-humans, discourses and materiality, as entangled, have effects and help do things, such as shape subject positions. In this sense, agency has been understood as distributed (see, for example: Suchman, 2007). How beings and things can have specific effects on self/subject-formation can also be relevant to discussions of subjectivity from within phenomenology, in my view. However, while phenomenological reasoning acknowledges that the materiality of the world in which the self lives and of which the self forms part can help shape what this self can be and do, agency in this perspective is typically understood as an aspect of, or a dimension of, the embodied self as situated, acting within the world and part of it. This is a difference in focus, and a tension, if these perspectives are brought into dialogue with each other.

Fourth, feminist technoscience and STS literature on subjectification have explored details of the interplay between humans and things (Moser, 2000). Such work has, for example, examined the differences between human-‘external’ devices of various kinds (walking sticks, spectacles) and human-‘internal’ devices (pacemakers), and has in this way added to literature on the cyborgian body–technology ‘merger’ (Oudshoorn, 2015: 57, 59; see also: Turkle, 2008). Phenomenological inquiry does not dispute the human–thing entanglement as a point of departure for theorising subjectivity (on the contrary, see for example Merleau-Ponty’s (2006) discussion on the role of human–thing relations for a blind
man’s mode of engaging and being in the world; see also: Hoel and Carussi, 2015). Phenomenological inquiry typically, however, encourages a distinct focus. While acknowledging Marian-and-the-cell-phone as a ground for subjectivity, explorations of her sense of the cell phone, for example, would grapple with how this sense is shaped through her bodily involvement and engagement with the cell phone in and as part of her lived situation. In such an analysis, Marian’s lived body–thing–world relation is one of on-going differentiation that she continuously lives with and through things.

Fifth, a note of caution is needed in discussions of feminist technoscience that draw on Barad’s understanding of bodies and environment as not simply taking ‘their place in the world’, nor only as ‘situated in, or located in, particular environments’, and feminist and other phenomenology of embodiment. The phenomenological use of the term ‘in’, in being-in-the-world, seems likely to result in misunderstandings. From within phenomenology, humans are (also) not ‘outside observers of the world’, nor ‘simply located at particular places in the world’ (to use Barad’s [2007: 184] formulations). Rather, as an embodied self, phenomenologically speaking, I am part of the world, oriented in the world, and my very embodiment helps to shape my perspective on, and experience of, the world, in non-deterministic ways: it helps shape what I can be and do, together with others and things. The ‘in’ in being-in-the-world, as Merleau-Ponty painstakingly seeks to make clear, is not about putting bodies in the world, nor only about bodies being located in a distinct, specific socio-cultural world – far from it. While analysis of the embodied self as being-in-the-world is indeed distinctly different from a Barad-inspired analysis of intra-action, neither approach merely understands bodies as located in specific practices or environments.

Instead of downplaying these differences, I see them as productive. Analysing the material-discursive entanglements and orderings helps to spell out subjectification, including enactments of normativities and power dynamics. In the situation of Marian, the analysis of subjectification could focus on how the other girls’ messages on mobiles and chat forums (that she was a ‘whore’, a ‘rotten fish’ and ‘going to die – now!’) rely on norms and conventions of speech that help to position the person that it names as non-acceptable (compare Ahmed, 2004; Guntram and Zeiler, 2016). This naming, via text messages and chats, implies positioning Marian in demeaning and threatening ways. However, and importantly, such an exploration of subjectification includes an analysis of how technologies and the physical environment together with the naming help to enact specific subject positions.

Further, dynamically shaped subject positions can be experienced in different ways, and phenomenological analysis could examine not only the role of singular, unique embodiment for subjectivity (as feminist and queer phenomenology, in particular, have done for quite some time; see for example: Alcoff, 2001; Diprose, 2002; Ahmed, 2006; Zeiler and Käll, 2014), but also, I suggest, the role of distinct subject positions for subjectivity in the phenomenological sense. Such an analysis could ask how affectivity and repeatedly enacted norms about
bodies and technologies that form part of Marian’s bodily engagement with others and the world can feed into specific subjectification processes.

**Affectivity, technology, others**

Some feminist technoscience and STS literature engages with the co-emergence of technology, science and society, with an eye for how affects are articulated and enacted within specific practices, how an expressed affect can help to shape practice and how affective framings can help to shape, for example, public engagement with public health science (Oikkonen, 2017; Lindén, 2019). Some such work explicitly studies affectivity within material-discursive practices with a focus on subjectivities. For example, Anne Kerr and Lisa Garforth study affective lab practices, with a focus on how ‘bodies and subjectivities are organized, evaluated and negotiated’ (2015: 4) within specific scientific labs. They explain that they study ‘preferred subjectivities’ within these labs, preferred styles of engaging with research and ‘the affects and emotions through which’ the preferred subjectivities are ‘practiced’ (Kerr and Garforth, 2015: 6). They identify specific preferred modes of acting and caring as part of scientific knowledge production practice at the lab, through which desired subject positions are enacted – as that of the ‘individual and mobile’ co-workers (Kerr and Garforth, 2015: 6). Further, they examine situations at the lab and narrations of co-workers with a focus on what affects help to do: how some affective practices ‘left individuals sticking out as different, feeling neglected or stuck on the margins’ (Kerr and Garforth, 2015: 13). They explain that they carefully reflected on the ‘affective position’ of the researchers at the labs, attending to accounts of ambivalence and discomforts about their ‘belonging’ in the labs as well as on joyous situations (Kerr and Garforth, 2015: 13). As another example, in the work already mentioned on Gardasil advertisements, Lindén explores which and how subject positions are enacted through the advertisements. She shows how images in vaccination campaign advertisements were designed so that viewers ‘should be affected’ and prompted to act – to get vaccinated (Lindén, 2016: 181, emphasis in original).

I read these analyses as exploring affectivity as a central dimension or feature within material-discursive processes of subjectification understood in terms of co-emergence of subject positions and things. A focus on affectivity within material-discursive practices is also central to Højgaard and Søndergaard’s call for a scrutiny of ‘distributed and circulating desires, emotions, sufferings, pleasures’ in subjectification – as when they suggest that a ‘cell phone and a particular desire’ might ‘merge’ and ‘enact a particular phenomenon of peer bullying among children’ (2011: 350). They suggest that new concepts are needed to capture the affectivity-technology phenomenon, such as ‘cell phone-desire merger’ (Højgaard and Søndergaard, 2011: 350).

I see this as one of the points of fruitful dialogue between the feminist technoscience-oriented discussions and those of phenomenology – particularly in analyses that centre on the lived existence as one in which bodily subjects affect
and are affected, move and are moved, and as one in which affects are not understood to be confined to the boundaries of the physical, material body.11

Phenomenologically speaking, affects – used as an umbrella term for distinct phenomena such as emotions, feelings and moods – are commonly understood as connecting the body, things and the world, in specific ways (e.g. Ratcliffe, 2009; Fuchs, 2015). Things, in such reasoning, are perceived and experienced differently depending on how they form part of the embedded self’s mode of being-in-the-world. The cell phone in Marian’s situation can be experienced by her as fearsome, or as inviting a response such as getting closer, because of how it connects her to others and the world. Further, the way it appears to her, as affectively charged, also says something about her body–thing–world relation. For Marian, the cell phone may invite online existence and enable friendship as well as subsequent threats. In the case of bullying, it may feed into Marian’s experience of online space as potentially harmful, other people as potentially harmful and herself as exposed to harm. The focus, in any case, is not only on a cell phone–desire merger, but on the body–cell phone–desire–world relation within which the cell phone may appear as affectively charged as it forms part of her body–thing–world relation and within which she, herself, in relation to the phone appears to herself as vulnerable.

Further, phenomenologically speaking, how the cell phone helps to open the world to Marian is likely to be informed by her past experiences of threatening text messages and socio-cultural-material sanctions regarding how one, as a 12-year-old girl, should or should not act online and offline. Starting from the understanding of lived body–world relations as dynamic and temporally extended, phenomenological inquiry has examined how past experiences can sediment into and shape body–world relations. This is not simply saying that habituated modes of withdrawing or reaching out online and offline can develop. Rather, this reasoning invites exploration of how the mobile as it forms part of Marian’s body–thing–world relation of affective attunement can open onto a world in which she feels the need to be continuously cautious – and when repeated over time, what this means for her; how this can become how she ‘just’ perceives the world, others and herself.

Lisa Käll (2009; 2013) takes phenomenological reasoning on emotions in yet another direction, and suggests that we should think of emotions as unfolding between self and other, in order to allow for a detailed understanding of how self and other, as embodied beings, are dynamically formed in relation to each other within a shared space. Käll maintains a phenomenological understanding of emotions as not neatly kept within the physical boundaries of the body, and examines the sociality of pain. She suggests that pain ‘breaks forth and unfolds between self and other in the space that we share’, and that the other’s bodily expressed pain and her way of curling up in bed form the way in which I see her as suffering, just as my way of responding to her pain will shape the way she emerges ‘as a self in pain, expressive of pain and dealing with pain’ (Käll, 2013: 36). When applied to the case of bullying, and to the emotion of shame, Käll’s analysis provides further analytical tools that can be used to understand subjectivity in the case of Marian. Phenomenological work has examined shame as an emotion
about oneself as having done something or being bad, which often involves one’s whole bodily being. The subject-in-shame, experiencing shame, may seek to hide from others, and in this way shame ‘works on and through bodies’ (Ahmed, 2006: 103; Dolezal, 2015). The subject-in-shame may, for example, walk quickly and quietly in the school corridor and hide in the toilets during breaks in order to avoid others, and this can be understood as both expressive of and grounding subjectivity, as one’s sense of self. The bullied self, who starts to blame herself, may turn away from others, but to the extent that shame implies feeling oneself to be bad, such turning away is not only from others but also from oneself. To understand emotions as unfolding between bodies, along the lines of Käll (2009), is to call for attention to how this *between* can form and have repercussions within the larger groups of girls. How shame unfolds between Marian and other girls may aggravate her perception of herself and others’ perception of her as shameful. The way in which others turn away from her can feed into her self-perception, her sense of herself as a self and her emergence as a self that was hatefully ignored offline and verbally assaulted online, just as her way of encountering others may feed into their perception of her and themselves.

Bringing feminist phenomenology and feminist technoscience together allows for careful investigation of what affects do. While phenomenological inquiry is attuned to affectivity as part of, forming and being formed within body–things–other–world relations, less attention has been directed to how patterns of affectivity shape and configure specific practices of beings and things. A feminist technoscience perspective, by contrast, is well-suited to analyse enactments within, for example, the constellations of girls, other beings and things in Marian’s situation – including affective expressions online and offline – with a focus on how affective entanglements help shape subject positions within relations of power or other hierarchies.

Through the encounters between Marian and other girls, distinct subject positions may emerge and/or be strengthened, and these encounters may feed into Marian’s experience of herself. In this regard, subjectification processes and self-formation in a phenomenological sense can be seen as two aspects that are equally important, and both are required in order to understand how radically the affectivity that one lives can condition the world of beings and things, for the subject. Further, phenomenological analysis would add concerns with affectivity–things–body–world relations and their formative effects on the self to analysis of the formation of affectivity–things mergers. Marian’s involvements with others and things co-constitute her subjectivity in the phenomenological sense, which can explain why some specific subject positions might be difficult for her to question.

**Normativity**

The study of subjectification can partly be understood as a study of enacted normativity. Through discourses and specific practices (medical, marketing, other), some subject positions become positioned as more desirable, possible,
impossible or troubling than others. Normative messages and norms about bodies (or about what should matter in relation to for example vaccination campaigns or food) are articulated, implicit in visual material and enacted in practices (see: Moser, 2000; Lindén, 2016; Johnson and Åsberg, 2017; Lindén, 2017; Vogel, 2017). For Højgaard and Søndergaard, explorations of ‘subjective enactments of normativities’ and an analysis of ‘how normativities of socio-cultural categories work on, in, and through human beings; as well as how matter or materialities and technologies enact and are enacted in these processes’ (2011: 350, 340) are needed in subjectification analysis. I agree. Again, I will first shift to the phenomenological perspective as part of my overarching argument that these perspectives benefit from being combined.

Phenomenological work has explored normativity as lived, interfused with experience and embedded in perception. In a basic sense, perception, in this perspective, is understood to be always normative. As shown by Merleau-Ponty (2006) in *Phenomenology of Perception*, the self learns to perceive specific things and beings as these things and beings: the sedimentation of habits of seeing allows for certain aspects of the world to be perceived in distinct ways. Seeing is differentiating, differentiating is learnt over time, and there is a bodily dimension to this. ‘To learn to see colours is to acquire a certain style of seeing, a new use of one’s own body: it is to enrich and recast the body schema’, writes Merleau-Ponty (2006: 177), while Al-Saji adds that the body is ‘recast by habit’ and ‘the perceived world is differentiated and configured in new ways; it appears differently. Indeed, visibility takes on a particular organization that corresponds to our habits of seeing; certain differences, and hence meanings, become salient while other dimensions of difference are invisible’ (2014: 378).

This makes clear the situatedness of the self. Further, habits of seeing are shaped within a historical and socio-cultural ‘visual field’, and phenomenologists have examined how these habits are typically not visible to us – we don’t see them, but see through them (Leder, 1990; Alcoff, 2001). Because that through which we see or engage with the world recedes or disappears, the specific habits of seeing can be experienced as ‘natural’: when habitual configurations of visibility are invisible, they can be experienced as ‘in-themselves features of the world’, of things as well as bodies (Al-Saji, 2014: 378).

This is important for the understanding of normativity as embedded in perception, applied to the case of Marian. Phenomenologically speaking, Marian’s perception of her peers, her cell phone and the school, just as the perceptions of the girls in the in-group, is a differentiated seeing in accordance with their tacit bodily ways of relating to and moving in the world in and outside of school. The habits of seeing are shaped within specific socio-cultural, youth-oriented ‘visual fields’, and include certain differentiations and meanings. If her and the other girls’ differentiating vision rests on a hierarchical girlhood that comes to be naturalised, then this vision can be difficult for both Marian and the other girls to question.

This leads to yet another point I would like to make. Maren Wehrle states that habits in the phenomenological context ‘enable normality […] a sort of “sense”,'
which is generated within and through experience and expresses itself in a subject’s habitual style of experiencing’ (2016: 57). Normality, here, is to be understood as not simply referring to norms about what should be perceived as normal in a particular time or place. Rather, it refers to the singular self’s, through habituation, taken-for-granted bodily mode of engaging with others and the world, through which tacit and seamless engagement becomes possible. The idea, familiar to readers of Merleau-Ponty’s work, is that repeated experiences, ways of acting or interacting, can become part of our habitual mode of being – and past interactions can become part of our bodily style of being, form what we ‘just’ do and help shape perception. The enactment of style gives stability to existence without implying determinism.

Just as before, the focus is on the lived body as a body–world relation that is open to change. Further, repeated ways of engaging with others and the world can feed into one’s bodily style of being and help open up the world. As a mundane example, consider what happens when someone learns to dance. The dance floor, which previously may have been perceived as treacherous, may now appear as inviting; the body–world relation changes (Malmqvist and Zeiler, 2010). As another example, as a person living with chronic pain, which restrains my walking abilities, I have ‘learnt’ to see distances as in need of careful measurement (‘Will I be able to walk the distance or not?’) and valuation across time (‘How much will this worsen the pain now, tomorrow, in the coming weeks? Is it even possible, and if it is possible but is painful now and will be in the coming weeks, is it worth walking this distance?’). This latter point of valuation is also relevant to the case of repeated bullying. Repeated bullying experiences can dynamically shape Marian’s body–world relation so that she ‘learns’ to see space as in need of valuation. The valuation in this case, however, is of the type ‘Should I walk across the school yard or take the longer route that avoids passing through the group of girls? Is it worth it?’.

Two phenomena are united in this reasoning. On the one hand, bullying can have profoundly disruptive effects on Marian’s body–world relation. While she previously may have walked the corridors of school without feeling self-conscious, this is no longer the case. Rather, in the encounters with the group of girls, her previously taken-for-granted lived body may break apart, and if this occurs, she cannot but be aware of her own body in space, in relation to others. On the other hand, yet relatedly, if Marian repeatedly experiences encounters with the group of girls as threatening and intimidating, such experiences can – through habituation and sedimentation – feed into her lived body. Because habituation is ‘an integral part of every experience’, a ‘violent normalisation’ or ‘forced habituation’ is possible: precisely ‘because being a body is always already generating habits, skills and operative learning’ (Wehrle, 2016: 63; see also: Zeiler, 2013). This explains why repeated bullying can have far-reaching negative effects – and why victims of bullying can retain a feeling of being vulnerable, long after the bullying has stopped.
If bullying comes to be repeatedly enacted in specific spaces, such as in the school yard, Marian may start to avoid such areas. Such areas and fellow girls, if perceived (having been learnt to be perceived) as potentially harmful, could – for Marian – come to be constituted as spaces and bodies that cause pain or are threatening, and she herself comes to be constituted as a target for others’ mocking. If this is repeated over time, such spaces and bodies could become what ‘just’ are perceived as intimidating, and making contact with the other girls could become just not for her. Further, if the mobile is always there, this also adds to what might be termed the ‘lived space dimension’ of bullying. When bullying occurs online, lived space and time intermingle: as long as online devices are not switched off, there is no space or time that is off limits. Violent exclusions that disrupt Marian’s body–mobile–world relation may take place also at night, at home. Finally, not only bullying, but also switching off the mobile, going offline, may be experienced as disruptive, if the mobile has, through being continuously used, come to be experienced as part of Marian’s body–thing–world relation. If Marian’s style of being is one in which her mobile comes to be experienced as integrated into her body–world relation, then switching it off might not be experienced as an option within reach.

In these ways, phenomenological reasoning demonstrates the bodily dimension of lived normativity (how repeatedly expressed and enacted norms can feed into bodily existence), and the normative dimension of embodiment (how human embodiment can normalise also behaviour that is detrimental to the self because of its openness and propensity for ‘normality’ as a pre-reflective ‘sense’ or mode of existence) (see Wehrle, 2016). Phenomenological reasoning also emphasises the ‘temporal thickness’ of embodiment (Merleau-Ponty, 2006: 464), whereby my past can feed into my present via my bodily mode of being and help structure my perceived field of possibilities so that not all actions stand out as equally within my reach.

‘This reconsideration of myself, this thematization, was not my idea’, Franz Fanon stated in his analysis of racist encounters, where the gaze of others made him reflectively aware of his bodily self, ‘not in the first person, and no longer in the third person but in triple’, when fellow travellers avoided sitting by him in the train (‘instead of one seat, they left me two or three’) (2008: 92). This demonstrates the forced dimension of the collapse of the previously lived body–world relation. For Marian, the social visibility, the mocking, the silence and the laughter can make it impossible for her not to be reflectively aware of her comportment, how she moves and where she sits, and at the same time she might seek to become less visible by trying to look and act in ways that are socially acceptable within the peer group. Repeated bullying can be detrimental if lived as a continuous disruption of her past transparent lived body, and experiences of such continuous disruption can feed into and re-shape her body–world relation.

Again, however, my point is that feminist technoscience and feminist (and related) phenomenology benefit from being combined. While feminist phenomenology offers tools for the analysis of how norms about bodies can come to be embedded
in perception, and to shape and become parts of Marian’s body–thing–others–world relation, feminist technoscience demonstrates the dynamic enactment of normativities within material-discursive practices. If combined, these analytical angles can help examine the details of how normativities co-emerge within specific material-discursive practices, and help shape subject positions; how affective and normative patterns can sediment into material-discursive routines and habits, and how repeatedly enacted – and lived – norms about bodies and technologies that form part of Marian’s bodily engagement with others and the world can also reinforce specific subjectification processes and subjectivity in the phenomenological sense.

Finally, research on school bullying has suggested that schools should take a proactive stance, emphasising the need for intervention (U’Mose Gordon, 2018). I suggest that the reasoning on subjectification, combined with an analysis of how norms can feed into bodies and sediment in lived space, offers a philosophical underpinning of such recommendations. In the case of Marian, the events of an evening several months ago seem to have congealed and become overdetermined, feeding into body–world relations of her and others in ways that enable the continuation of bullying. This helps to explicate why an ‘event’ – in the phenomenological sense of a disturbance of a habituated relation – might be necessary for the bullying to stop. If seeing is learnt, and if the normalisation of habitual and socially sedimented ways of seeing (and being) helps render the habits of seeing invisible, a tracing of, and explicit attention to, these habits might be a necessary starting-point for change. Such change may include a re-learning, a learning of an anti-bullying vision where one learns to see when and how inclusions and exclusions are made (compare Al-Saji, 2014). Learning to identify normative messages and norms about bodies, as done in subjectification analysis, seems crucial in this regard.

To sum up: the phenomenological focus here is on normativity as lived, embodied and embedded in perception. It explicates how and why lived normativity can have far-reaching detrimental effects, while the subjectification take on normativity seems particularly promising in order to spell out how norms about bodies – and what norms about bodies – come to be expressed and enacted within constellations of humans and things, discourses and materiality. Both of these approaches are needed, I suggest: making visible the discursively materiality-constituted subject-positions should be combined with examinations of subjectivity as a relation in which norms about bodies are lived, expressed, enacted and, at times, also resisted, in order to understand the bullying production, as it emerges and unfolds, and how bullying is lived. While the ‘thickness’ of subjectivity in the phenomenological sense is not to be reduced to subject-positions, and cannot do without a first-person perspective, it would be equally troubling not to attend to how orderings and specific material-discursive entanglements help create or shape subject positions, and how subjects and objects co-emerge, are enacted and enact specific phenomena.
What bringing these strands together enables

Bringing feminist technoscience and feminist phenomenology together allows for the analysis of embodied and situated selfhood and broadens this to include details of material-discursive orderings and enactments as that which constitute the situatedness. This is not new to phenomenology. The situatedness of the self is, on the contrary, central to the phenomenological understanding of subjectivity. However, a focus on material-discursive entanglements that co-produce the social, the technological and subjectivity as ‘inextricably intertwined’ (to make use, again, of Åsberg and Lykke’s [2010: 299] formulation) has not been on the phenomenological front line. Such a focus has, instead, been characteristic of the works within feminist technoscience with which this article engages. Feminist technoscience studies have examined dynamic subjectification within material-discursive entanglements. However, while contributing to the understanding and theorising of subjectivity, consideration of the sense of self – the sense of oneself as a self and the sense of agency (along phenomenological lines of interest) – has been less central in feminist technoscience. To once more return to Marian’s situation: both perspectives are needed in order to understand the conditions of subject-formation in bullying, its formative effects and what is needed for resistance.

Bringing together these perspectives allows for an analysis that holds together the co-emergence of subject positions and things, subjectification and subjectivity from and as a first-person perspective of oneself as a self. It allows for careful attention to materiality and embodiment, as phenomena that are lived (a feminist phenomenological contribution) and enacted/enacting within material-discursive entanglement (a feminist technoscience contribution). By acknowledging how norms about bodies can be expressed and enacted within constellations of humans and things (a feminist technoscience contribution), this analysis can help explicate how such norms can, when repeatedly expressed and enacted, sediment into one’s lived bodily existence and, through this embodiment, be embedded in perception (a phenomenological contribution).

Finally, if these perspectives are not brought together, the material-discursive situatedness of the self will risk not being engaged with, in detail, to the detriment of particularly feminist phenomenology that does attend to how the singular body, as unique and different, situated within normative contexts, can form one’s embodied self and ways of engaging with others and the world. Feminist technoscience of the kind that wants to examine the co-emergence of the social, the technological and subjectivity within specific practices, on the other hand, risks not addressing the role of affects and embodiment for subjectivity as and from a first person perspective of oneself as a self – despite such an analysis contributing to the understanding of what subjectification within material-discursive entanglements can do to and mean for those involved. While bringing these together might challenge existing theoretical orthodoxies, it would contribute to feminist theorising on subjectification/subjectivity with an eye for embodiment, materiality, affectivity and normativity.
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Notes
1. To my knowledge, no previous work examines subjectivity/subjectification with an explicit focus on analytic differences, tensions and benefits when/of bringing feminist phenomenology and feminist technoscience into dialogue with each other. However, a growing bulk of literature in post-phenomenology combines insights from STS with phenomenological reasoning in interesting ways (see, for example: Verbeek, 2005; Ihde, 2009; Hoel and Carussi, 2015). In contrast to my current focus on subjectivity/subjectification, affectivity and normativity, much post-phenomenological work has focused on ‘technological mediation’, where this mediation is understood as shaping the ‘mutual relation in which both subjects and objects are concretely situated’, as when technologies such as glasses or ultrasound screening help shape the users as subjects, their world, the way subjects are ‘present in the world’ and the way ‘their world is present to them’ (Verbeek, 2005: 130). Further, a few scholars have engaged with (particularly Merleau-Ponty’s) phenomenology, new materialism and feminist theory. Catriona Mortimer-Sandilands brings together, among others, Merleau-Pontian reasoning on embodiment, time and memory and ecophenomenology, with a focus on ‘embodied perception and reflection […] in the midst of the technical and discursive (i.e., power) relations in which they cannot help but be situated’ (2008: 267). Nikki Sullivan (2012: 299) critically discusses works in new materialism and/on ‘animal sex’, the somatechnics of perception and phenomenology of embodiment. Perception, Sullivan explains, is ‘always-already “of-the-world”, always already a co-constitutive “seeing-with” that shapes the seer and the seen, the knower and the known’ (2012: 303), as always ‘intertwined’ via the somatechnics of perception and phenomenology of embodiment. The present article shares Mortimer-Sandilands’ concern with embodied perception and technical-discursive-historical relations and embeddedness, and has a different focus on what the different perspectives of feminist phenomenology and feminist technoscience help do, analytically. The present article also shares Sullivan’s understanding of perception, but again, also has a different focus on how differences between feminist phenomenology and feminist technoscience could be put to productive use in the analysis of subjectification/
subjectivity, affectivity and normativity. For an ethnography that makes use of new materialist perspectives and discusses embodiment via Merleau-Ponty, see: Matilde Lykkebo Petersen (2019). For a discussion of, among other things, similarities and differences in foci between actor network theory (ANT) and Merleau-Ponty’s phenomenology, see: Diprose (2009).

2. This is also why I understand Marian’s situation as particularly apt to think with, in this article. It invites analyses of the material-discursive, the co-emergence as distinct subject positions and technology (such as mobiles in online bullying) and the role of embodiment, affectivity and norms about bodies and relations for subjectivity – i.e. foci that have been central in either feminist technoscience or feminist (and other) phenomenology, or in both.

3. See also Barad’s formulation: ‘To be entangled is not simply to be intertwined with another, as in the joining of separate entities, but to lack an independent, self-contained existence’ (2007: ix).

4. Barad suggests a methodology that ‘investigates the material-discursive boundary-making practices that produce “objects” and “subjects” and other differences out of, and in terms of, a changing relationality’ (2007: 93; see also, for example, pp. 139–140).

5. Work on how bodies and subjectivities are (dynamically) ordered (such as Moser, 2006; Lindén, 2017) allows for examinations of how subject positions are hierarchically placed within certain practice, advertisements or texts. The notion of co-emergence makes the intertwining and dynamic interrelation (or intra-relation, to use Barad’s notion) of emerging factors, features and phenomena central (as in the co-emergence of society, medical practices and science). To talk about the co-constitution of, for example, science and social order (see: Jasanoff, 2004: 14) is to put emphasis on how ‘the dynamics of politics and power, like those of culture’ are ‘impossible to tease apart from the broad currents of scientific and technological change’. They co-constitute each other, and are integral to each other (without becoming the same).

6. See Søndergaard for a discussion of, among other things, the 12-year-old boy Tony’s avatar being hit, whereby Tony’s face ‘twists with pain and anger’ and he shouts ‘Ouch, it hurts – I’m bleeding!’ (2013: 63). Virtual destruction, Søndergaard writes, is ‘allowed to affect particular real-life physical experiences and sensations’, and ‘[i]ntra-activity involves Tony’s muscles, movements and powerlessness in real life, which entangle with his virtual-life experience; this affects some kind of continuity between his real being and his virtual material-discursive and subjective being – between real and virtual positioning’ (2013: 63). I see this as an interesting contribution to the subjectification/subjectivity discussion that further opens for discussion of how a Barad-inspired approach could be combined with a phenomenological understanding of subjectivity from a first-person perspective.

7. I engage with hermeneutical phenomenology that emphasises the situatedness of the self as being-in-the world, and phenomenological work that examines the role of embodiment for subjectivity. Further, I engage with feminist and critical whiteness phenomenological work that examines normativity as lived, embodied and embedded in perception (Alcoff, 2001; Al-Saji, 2009).

8. Feminist phenomenology in particular has emphasised the need to study how the singular body, of a particular sex, age or ability, can inform embodied selfhood and interactions with others, things and the socio-historical world in which one lives (see for example, Zeiler and Käll, 2014).
9. Studies have examined assumptions and norms about bodies in relation to surgery on children born with intersex anatomies or to congenital twin or breast cancer treatments, and how such lived assumptions and norms can help shape subjectivity (Shildrick, 2008; Weiss, 2009; Zeiler and Wickström, 2009; Malmqvist and Zeiler, 2010; Slatman, 2014; Feder, 2016; De Boers et al., 2018).

10. While it has been suggested that ‘becoming cyborgs is not a reversible step’ (Turkle, 2008: 12), which invites questions of the requested temporality of such cyborgian becoming, Højgaard and Søndergaard describe Marian as ‘constituted as a human-technological merger’, and as a ‘cyborg’ (2011: 354).

11. There is, of course, a larger literature on affect (see Massumi, 2002; Blackman and Venn, 2010; Wetherell, 2012). For space reasons, and since I explore potential bridges between feminist technoscience and feminist/phenomenology, I will not discuss this literature here.

12. For analyses of how the gaze and behaviour of others can imply an ‘affective disturbance’, in which the past smoothness and transparency of one’s body–world relation is disrupted, see: Bartky (1990); Leder (1990); Sartre (2003); Dolezal (2015).

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