Morning Sickness and Gut Sociality: Towards a Posthumanist Feminist Phenomenology

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Beginning with the idea that our bellybuttons specifically and our guts more generally are a good thing to think with, this paper proposes the idea of "gut sociality"—that is, a materialsemiotic, posthumanist mode of responsivity between bodies that hovers in, around, and through the gut. In order to deepen our understanding of this notion, I provide a phenomenological sketch of morning sickness as one instance of gut sociality. To conclude, I propose that in order to accommodate new modes of being embodied in our twenty-first century world, a method of posthumanist feminist phenomenology should be further developed. This practice should draw upon science discourses, but consider both the risks and the promise of a biological turn.

1. Gut Sociality in an Ectogenetic Future

A couple of years ago, I picked up the New Year's edition of *Adbusters*, stocked with warnings about our strange and precarious earthly future. A short article by Maria Hampton called "Faking Babies" included the following text:

"The first post-human borne by a machine will have no umbilical cord. Decanted from artificial wombs after ectogenesis, or out-of-body gestation, generation zero will lack not only bellybuttons—the trivial if collective scar of the human condition –but also any significant links to the previous 100,000 years of motherhood." (Hampton, n.p.).

Hampton goes on to tell us that this "unsettling scenario" is already well underway. Indeed, the new millennium has already seen goat foetuses in Tokyo being kept alive for weeks in plastic breadbasket-sized tubs, and mice surviving (albeit "mortally deformed") for up to 31 weeks on uterine-shaped scaffolds of collagen at Cornell University (Simonstein 2006). Scientists predicted a "functioning prototype" of an ectogenetically spawned being by the year 2010, but so far, scientists have been unable to fulfil this prediction.

Nonetheless, the scenario remains unsettling for a variety of reasons: bioethicists, for example, are justifiably concerned with legal and policy implications of ectogenesis. In a world where biotechnological invention is patentable, and life forms can be copyrighted, questions of ownership and commodification are a prime concern, while issues of eugenics, disability rights, and research experiment protocols all raise equally pressing questions around the advent of such radical reproductive technologies. But what struck me immediately about Hampton's article was her almost off-handed mention of that "trivial scar of the human condition." In effect, ectogenesis would render the bellybutton redundant. Notwithstanding the fact that current biotech experiments in this area are all still very much attached at the navel (the goats in vats were removed from their mothers' uteruses, and their umbilical cords hooked up to artificial placentas, for example), this future-in-the-making got me thinking: are our bellybuttons really so trivial? What do we stand to lose if our bellybuttons become obsolete?¹

Certain "facts" about our bellybuttons sprang immediately to mind: the bellybutton marks umbilical attachment to a maternal body. On one view, then, bellybuttons are a key index (in a Peircian semiotic sense)² of sexual difference; they demand of us, as Luce Irigaray might do, that we remember our embodied debt to our maternal beginnings.³ But at the same time, bellybuttons are also a significant marker of bodily commonality: as Hampton notes, they are our fleshy membership card to Club Human (although, more accurately, we might say, "Club Mammal").⁴ In other words, they materialize both sexual difference *and* commonality across this difference. One question provoked by this navel-gazing might be whether bellybuttons could provide a fecund site from which to expand a feminist understanding of sexually different embodiment.

But thinking about bellybuttons provoked other questions and associations, too: when the "cord is cut," does not the gut continue to be an affective centre through which we take up and cultivate relations with others? In starting to pay attention to my own gut centre, for example, I noted that a considerable amount of embodied information is processed through this portal: the "funny feeling" we get when a situation seems out-of-sorts; the butterflies of anticipation when going to meet a loved one; the dull ache of separation from that same person. All of this intercorporeal affect seemed to collect and hover around "that trivial little scar."

Moreover, even as we extend outwards to connect to other beings, we simultaneously fold inwards, into our own guts, into our centres of affect.⁵ Indeed, while the affect I experience in my navel area could be my body reaching out in a mode of intersubjective relationality, just as likely, it is the world, and my situation therein, pressing into me, my gut responding. Not only a potential mediator between commonality and difference, my gut centre also seemed to serve as a mediating portal between my most deeply buried or ignored affective states, and the intercorporeal community in which this affect was bound up. It seemed the bellybutton was not only a place on the map of my body, but also an action or a situation which I took up: perhaps we "bellybutton" (as a verb), as part of our affective interpermeation with our worlds and our others.

So all this led me to believe that bellybuttons might be good things to think with, in thinking about embodiment. More specifically, the act or situation of bellybuttoning suggests to me a way in which we might think about sociality as an affective, but also adamantly material, fleshy and even visceral phenomenon. To take apart the very word, "bellybutton" means a gut fastening. It is not a permanent welding but a way of attaching and unattaching through our guts. "Navel," etymologically, relates to words such as "relationship" and "next of kin."6 I am thus prompted to ask: what kind of kinship relations, beyond the obvious maternal-foetal ones, do we enact or take up through our guts? In one sense, this question enacts a metaphoric maneuver-we are not, after all, attached to other others by a literal umbilical cord. Yet, by considering the bellybutton in its gerundial form, might it be possible to explore how our "gut fastenings" continue to be enacted across various instances of bodily being-with those who affect us, and whom we *affect* in turn? Importantly, then, "bellybuttoning" is more than metaphor. Bellybuttoning may indeed be a key "material-semiotic knot" (to materialize Donna Haraway's phrase in a most literal sense!)7 for exploring intersubjective, affective relations.

At the same time, the site of the bellybutton is a busy one. While it may be where some bodies get to know an emergent new life, growing from the inside *out*, or where others feel the angst of their troubled relations to the world pressing *in*, there are other kinds of relationality afoot in my gut, too. Is that queasiness I am experiencing a response to the phone call I don't want to make... or is it only that the yoghurt I had for breakfast was slightly "off"? Are those distracting pangs a way of dealing with the absence of a lover... or simply the delay in eating my lunch? In other words, our gut centres also seem to ask important questions about how we categorize "gut feelings": is that slow churn of disquietude a manifestation of intercorporeal sociality and affect, or rather just the good old biochemical machinations of my innards? On what grounds can we differentiate what we might call 'affect' from what we might call "biological reaction" or "physiological sensation"?

And, if we are going to entertain my suggestion that what is going on in the area of the navel is some sort of sociality—a *gut sociality*⁸—then

we also probably want to ask about the kinds of bodies that are engaged in this "socializing." Fully-formed human bodies socialize, for certain. And it seems as though human bodies quite plausibly "socialize" with foetal bodies, in utero, as well. But humans and dogs socialize, dogs and cats socialize, and cats and fleas enact a mode of sociality, too: they all engage in responsive—rather than causal or mechanistic—relations with one another in ways that *matter*. And if this is true, might it not also be plausible that what is going on in the "merely biological" depths of my viscera is *sociality*, too?⁹ Part of this question is about how we distinguish the biological from the socio-cultural, but in part this question also rests on our understanding of "intercorporeality," and specifically what counts as a "corps" (or body) that is "inter-" (or social) with another: if the intertwining of bodies extends beyond the human, then perhaps the sensation I experience when my body intertwines with the bodies of "lactobacilius gone wild" (i.e., that slightly rancid yoghurt) is just another manifestation of intercorporeal sociality, but on a different, more-than-human scale. If, as Donna Haraway claims, my "companion species"—i.e. those specimens of life with which my body interacts and that make "me" who I am, and vice versa-are not only dogs, or horses, but also "rice, bees, tulips and intestinal flora" (Haraway 2004: 302), then certainly I enact social relations with these other entities too. In what other terms, after all, might we be considered *companions*? It seems that if we follow Haraway's lead in expanding our understanding of intercorporeality, then the separation of the "merely" visceral or biological from the more profoundly intersubjective, socio-affective modes of embodiment becomes problematic.

All of these suggestions open, in turn, to a provisional understanding of what *gut sociality* might be. Might we (cautiously) suggest that this refers then to a mode of responsivity between bodies that hovers in, around, and through the gut?

Yet, while sociality could be simply defined as responsivity, or the capacity of bodies to affect and be affected¹⁰ in mutually implicated ways, *gut sociality* entails two key features that are necessary to underline, if we wish to generate theoretical usefulness from this. First, this is a sociality that is both decidedly material and adamantly posthumanist. Here, posthumanism refers to the refusal of any unquestionable, a priori or hierarchical division between the human (and all we associate with this category) and the non-human,¹¹ particularly as such distinctions are often dependent upon an ontological separation of "natural" bodies from our "cultural" ones – that is, brute matter

from more meaningful (and usually exclusively human-oriented) processes and projects of subjectivity. As noted above, *gut sociality* problematizes these customary maneuvers. The bodies entwined in gut sociality are affecting one another in ways directed by the material stuff of which these bodies are made, but in open-ended circuits of response.

In considering this materiality, it is important to stress that such responsivity is not mechanistic causality. To help clarify this point, we could look at Elizabeth A. Wilson's work on organic empathy and the capacity of the biological substrata to "problem solve." Wilson seizes onto the idea of the "biological unconscious"—a term coined by erstwhile student and penpal of Freud, Sandor Ferenczi. According to Ferenczi, our biological matter manifests an unconscious; our organs have "memories"—ones that may be evoked by psychological stimuli but are manifest in a very real, *physiological* way – i.e. in the way our organs "think." On this view, our organs are "knowing things" all the time, "the [biological]substrata themselves attempting to question, solve, control, calculate, protect, and destroy" (Wilson 2004: 82).¹² Sociality as responsivity is thus registered not only by our socio-affective subjectivities, but in our very organic, visceral being.¹³

Moreover, while the "other bodies" that interpermeate my gut are sometimes human bodies, they are also animal and vegetable bodies,¹⁴ chemical or toxic bodies,¹⁵ bodies just barely perceptible at the molecular level. For instance, while I may pay little attention to the intestinal flora that colonize my gut, I am co-implicated with these more-than-human embodied others in various intra- and extracorporeal circuits of sociality. In many different ways, they render my world hospitable and habitable. Gut sociality thus problematizes the idea that sociality would be solely an *interhuman* mode of relation, and instead suggests a notion of sociality that is posthumanist in orientation; this understanding opens up the term "sociality" beyond its common privileging of the human subject.

But even if such an expansive understanding of "sociality" is helpful is some ways, the caution we need to exercise here also concerns diluting the term so far as to render it meaningless. My queries here are thus geared towards a specific kind of (posthuman) sociality, namely gut sociality, where the term is qualified in a way that is *geographically* significant. We recall that this responsivity operates in a specific zone that is in, around and through the gut. Our bodies are complicated topographies whose spatial choreographies are hardly random. The location of our hands on the ends of our long, swingable arms is meaningful, just as there is a reason that our eyes are placed

on the fronts of our faces, or that our mouths and anuses are rather distant from one another.¹⁶ The bellybutton and the gut, must also, then, occupy a specific and significant place upon our corporeal territory. In many languages, the word for navel has a secondary meaning of being a centre or a hub.¹⁷ Moreover, the fleshy barrier that separates outside from inside in the zone of the gut, and the internal viscera that this barrier thinly veils, are notoriously exposed—hence the symbolic weight of the foetal position, and the prudent advice concerning the sort of stance one should adopt when at risk of being mauled by a bear. Surrounded by bony cages but with none of its own to protect it, anchoring extensions out into the world but with none of its own to enact an instrumental grasp, the gut enacts of space of vulnerability that is as material as it is psychic, affective and symbolic. Located at the hub of all of our other bodily projects, the gut becomes a key site of mediation and interface between bodies of all kinds. Gut sociality, as a concept then, attempts to gather diverse instances of sociality as related to one another specifically because of their connected corporeal topography. Rather than distinguishing between our bodily engagements according to divisions of "biological" and "cultural," or "mechanistic" and "intentional," gut sociality suggests that we might consider certain bodily projects as joined by material proximity—in a sense, as a way of paying respect to the anatomical syntax that our own bodies suggest. Such a schematization does not intend to deny the important ways in which visceral processes might differ from other things. Rather, it hopes to open up directions of phenomenological inquiry that other schematizations might downplay or obscure.

The above proposal—that gut sociality might be a mode of embodiment worthy of further attention—thus forms the backstory of this paper. I now turn to a specific instance of this phenomenon—morning sickness—and discuss it in light of Drew Leder's phenomenological account of viscera and foetal bodies. In undertaking my own phenomenological sketch of gestational nausea, my primary aim is to generate a more robust justification for the significance of a gut sociality, and the theoretical work it might do. Additionally, however, I hope to elaborate the potential of embracing a posthumanist sensibility in feminist phenomenology. Gut sociality, as noted, demands a certain conceptual shift toward the posthuman, but it will also require methodological flexibility. By opening the ways in which medical and other scientific knowledges can amplify (without ever replacing) first-person phenomenological description, I suggest that phenomenological epistemologies and methods can also become posthumanist. In my own experimentation with such methods, I aim to contribute to the articulation of a feminist posthumanist phenomenology.

2. Dis/appearing Bodies

My research on embodiment is grounded in a phenomenological sensibility in terms of method and practice: I want to begin by going "back to thing itself"—that is, by asking questions derived from my lived experience of being embodied. Like some other phenomenologists, I am committed to the idea that close, careful attunement to sometimes seemingly banal aspects of embodiment can yield rich and powerful insights into the structures of things, but also into the ethics and politics of being in the world. As a feminist phenomenologist, I am also particularly attuned to those insights that might be revealed through attention to sexually different embodiment, and like some other feminists, I am committed to the idea our bodies are not just lumps of matter we lug around with us, but are rather valuable resources of resistance and knowledge. While my writing (of, on) the body is inspired in particular by the feminist continental tradition, my understanding of what it means to be a body also owes a great debt to Merleau-Ponty's phenomenology of embodiment-that is, as an open-ended, chiasmically entwined-with-the-world phenomenon through which we come to know that same world.18

Merleau-Ponty's rich phenomenologies of relationality and intercorporeity prepare me in important ways for thinking through the processes of responsivity that gut sociality suggests. And, although it is not the body of work for which he is best known, a posthumanist sensibility can be detected in Merleau-Ponty's later work. In his Nature lectures, for example, he discusses our interpermeations with our "strange kin"- the other animalwhereby the cut between human and non-human is not ontologically absolute (2003: 271), and refers to the organic, more-than-human aspects of human corporeality. Yet, Merleau-Ponty's attention to our viscera and the inner depths of our biological bodies is not fully developed here. For this, we need to turn elsewhere. Merleau-Ponty's silence on this matter is in part the impetus for Drew Leder's book, The Absent Body (1990). Here, Leder phenomenologically describes various examples of bodily viscerality to elabourate a theory of the "recessive body." According to this theory, visceral and organic function are necessarily "hidden from view," muted, accepted as virtually imperceptible, in order to facilitate our ecstatic body's being-inthe-world. Leder's key amendment to Merleau-Ponty's phenomenology of embodiment, then, is to acknowledge the phenomenological significance of this visceral realm that the visible body rests upon. Viscerality, according to Leder, makes the ecstatic or surface body possible.

Moreover, in suggesting that one of the defining features of the recessive body is the *affective* way in which we experience the viscera's communications, Leder covers ground relevant to my proposal of gut sociality. He notes that in terms of the *surface*, or ecstatic body, "the separation between the perceiver and the perceived makes possible a dispassionate scan." But, "by contrast, visceral sensations grip me from within, often exerting an *emotional insistence*" (40, my emphasis). In other words, Leder implicitly notes the blurring between the visceral and the affective (or perhaps the way in which the visceral is part of the affective) that is a key feature of gut sociality. And not least, Leder is well aware that the geography of our body parts is always significant, and that the physical and existential aspects of our embodiment are always intertwined, and mutually constitutive (44). Again, these realizations are key to an appreciation of gut sociality as I have sketched it out above.

But there are tensions within Leder's account of our viscera as well. For example, Leder accounts for this "almost emotional" experience of visceral discomfort not in terms of a phenomenological opening-perhaps towards a world where the viscera are also social and affective-but rather in terms of a closing down: such sensations indicate a "withdrawal" from exteroception (directed surface perception) and also thus constitute a "more limited" perceptual field. "Inner sensation," or interoception, he claims, is nowhere near as robust as exteroception, where even a single sensation (e.g. touch) yields "a huge variety of sensory statements" (40). Leder thus recognizes the *difficulty* with which we might locate, distinguish or categorize inner sensations—but rather than reading this as complexity or a qualitative (rather than quantitative) difference from exteroception, Leder's argument depends upon understanding visceral experience as generally "lesser." Despite, then, the great strides that Leder makes in imbuing the viscera with phenomenological significance, a hierarchization of that significance still persists. Matter, viscera, and the biological substrata remain at the short end of this theoretical stick. Leder's descriptions of pregnancy as illustrative of the recessive body amplify these tensions. Leder writes:

The mysterious process of conception and implantation takes place out of the range of [the maternal body's] apprehension and will. ... But once [pregnancy is] initiated, an impersonal viscerality takes over... The early stages are largely imperceptible... The mother experiences gestational processes indirectly through their global effects on her body: nausea, food cravings, and the like. Later there is an interoceptive experience of the fetus's movements... Yet, as with all visceral processes, such perceptions are highly limited, traces of a vast invisible realm (60-61).

Undoubtedly, pregnancy is a mysterious phenomenon. Many women who have experienced it would corroborate the "disappearance" that Leder describes. But at the same time, other autoethnographic descriptions and phenomenologies of pregnancy¹⁹ suggest that Leder's account might require further nuancing: conception and implantation are often sensed by women (they are not always entirely out of the range of apprehension); early stages of pregnancy, likewise, can be perceptible in various ways. The perception of foetal movements in some cases is not as "highly limited" as Leder suggests, and can be as complex, localizable and open to scrutiny as many exteroceptive experiences. To be clear, I am not stating that the experience described by Leder is *never* manifest, but only that the distinctions between out and in, maternal body and foetal body, interoception and exteroception are not as definitive as Leder indicates. The hierarchy between these poles is most clear in his assumption that the foetus belongs to "recessive" being-as it resides in a pre-personal state of "metabolic anonymity." This suggests that the foetus is not unlike an organ, and thus similarly, is primarily a "nullpoint in experience and memory" (60). In terms of our dominant body-as-lived, it mostly just disappears.

Leder's commitment to describing the predominant *absence* of the recessive body is likely what keeps him from fully accounting for the varied, localized and very *present* ways in which women can experience pregnant embodiment and foetal life. Additionally, his commitment to the connection between a literal visibility (i.e. that which we can see with our eyes) and that which we experience as *present* and thus can complexly schematize, might also account for his dismissal of other dimensions of sensation that women are very much alive to during pregnancy as, again, inferior to vision. We get a sense of this sentiment in the opening sentences of the book, where Leder writes that "my expressive face can form a medium of communication only

because it is available to the other's gaze. No organ concealed in the hidden depths of the body could actualize intersubjectivity in this way. It is thus necessary that our perceptual, motor, and communicative powers cluster at or near the body surface" (1). As evidenced in this statement, Leder's important arguments in this book demand a certain schematization of bodily experience such that certain phenomenological nuances can be foregrounded. But as a result, whatever is happening *in* the gut, *in* and around pregnancy must, like other visceral experience, take its place in a hierarchy of bodily experience—barely sensible, necessarily absent, and phenomenologically distinct from the outwardly-directed ways bodies engage in the world.

My intention is certainly not to counter Leder's account with the desire for a metaphysical distinction between the foetus and "mere organs." In fact, I find Leder's implicit alignment of foetal and organic life productively provocative.²⁰ But instead of downgrading foetal sensation to the level of barely perceptible, and thus phenomenologically inferior to exteroception, what if we instead *up*graded organic life? Or better yet, what if we replaced such bifurcated hierarchies-whether explicit or implicit-with more ambiguous schemas? I propose that if we unpacked Leder's reference to "nausea and food cravings" in more detail-that is, if this visceral feeling were also understood as some sort of social responsivity between bodieswe might also begin to break down the hierarchies that Leder's account implicitly upholds. In doing so, we might be better able to understand gut sociality as a part of lived experience, whereby the social is not the sole prerogative of human subjects, whereby responsivity happens at the level of organs and matter, as well as between these and human subjects, and whereby the geocorporeal zone of the gut is recognized as a particularly rich site of such complex and posthumanist material sociality. To ground these propositions in a concrete example from the lifeworld, let us turn now to a phenomenological sketch of morning sickness.

3. Morning Sickness

Recently, I was talking to Older Sister about Younger Sister, now twelve weeks pregnant. *She's feeling really sick*, Older Sister told me, to which my immediate reaction was, *How awful!* I was immediately brought back to those days when even getting out of bed seemed like a heroic feat, when I wondered how many social engagements I could cancel without losing my friends entirely. These were days of incurable lethargy and constant anxiety about what my stomach might be able to hold down. I remember carrying a paper cup everywhere I went so that I might spit out the constant stream of saliva caused by an ever-stimulated gag reflex—and I would appear to be simply drinking my coffee. But Older Sister interrupted this train of memories with her own surmisal: *Isn't that great?* she asked. Having twice experienced the very *present* absence of these sensations as her own foetuses slowly miscarried, Older Sister was more inclined to view Younger Sister's discomfort as a positive sign. *It means something's happening*, she said.

Something is Happening. Some of that something is clear: a zygote becomes morula becomes blastocyst. There is implantation into the uterine walls. Optic cups and otic pits form; buds of nascent limbs sprout. A backbone is grown. The brain divides into vesicles, and cell differentiation occurs at break-neck speed. But other parts of that "something" are far more mysterious. While the developments I just described are apparently, according not only to Leder but to medical practitioners as well, *imperceptible*, for many women, these changes are accompanied by anything from mild queasiness to severe vomiting. Some enter a perpetual flu-like state; others experience sharp but short-lived periods of illness on a daily basis. About one woman in every hundred experiences symptoms so severe that she must be hospitalized (Flaxman and Sherman 2001: 146-7).

But the single most fascinating thing about gestational nausea, morning sickness, or (as the medical journals often refer to it) "NVP" (nausea and vomiting in pregnancy) is that it continues to completely elude medical certainty. Medical knowledge is incapable of explaining its precise cause, predicting its severity or effectively treating its symptoms. As noted in the American Journal of Pharmaceutical Education (2003), "Much of the frustration that clinicians experience while managing nausea and vomiting in pregnancy (NVP) is caused by a lack of understanding of the various factors underlying NVP and how these factors interact in pregnant women" (Kouzi, n.p.). Furthermore, "Although the proximate, physiological mechanisms underlying NVP have been extensively studied, the cause of NVP remains unknown. There currently are no scientifically based treatments that address the cause of NVP" (n.p.). Quite simply, as one researcher phrased it, "hyperemesis gravidarum" (also known as severe nausea and vomiting in pregnancy) is "a diagnostic and therapeutic enigma for the obstetrician" (Starks 2003, 253). This is echoed by others: "Hyperemesis gravidarum remains a puzzling condition for both physicians and patients because there is no known cause or cure"—or as this researcher is quick to clarify, while the biological cause *is* known (pregnancy), "the exact causal pathophysiological cause" remains a mystery (Munch 2002a: 1267). The very mechanics of the ill feeling are also elusive: "Although the mechanism of emesis (i.e. vomiting) is well understood, the mechanism responsible for nausea remains unclear" (Kouzi 2003, n.p.). All of this uncertainty leads, moreover, to what feminist researchers document as an overdiagnosis of psychosomatism: if medical science can't prove how or why it is in the body, then it must be all in the (always female) patient's head (see Munch 2002a and 2002b).

In other words, morning sickness does not fit well with western medical paradigms that expect biochemical and physiological processes to be intelligible and manageable. This leads me to venture two further propositions. First: could it be that the "biological substrate" is not as mechanical as its reputation might suggest? Gestational nausea and vomiting may be exactly the kind of organic problem solving at work in the biological unconscious that Sandor Ferenczi, and Elizabeth A. Wilson after him, posit. While there is *clearly something happening at the biological*, visceral level (Munch 2002b), this substrate is hardly "mechanical" (as in: programmable, predictable, knowable). The viscera are engaged in some thinking of their own. The medical profession has at times proposed some tentative explanations of gestational nausea. One that has gained more traction than others in recent years is the suggestion that morning sickness is a defense mechanism, deployed by the body to protect the particularly susceptible maternal body-and the even more vulnerable foetus-from potential food-borne pathogens (Flaxman and Sherman, 2000). But even if such an explanation turned out to be the case, it would support rather than discredit the notion that the viscera are engaged in some rather sophisticated problem-solving. Recalling that gestational nausea is predictable in neither presentation nor severity, again, we have to resist the temptation to label potential food pathogens a mechanistic "cause." Perhaps not unlike the "thinking" fauces (the place where the back of the mouth joins the pharynx) that, in Elizabeth A. Wilson's account, is ideally situated to rewire the empathic circuits between mood, digestive organs and social circumstances of a person with bulimia, the gut is ideally placed to rewire the empathic circuits between maternal body, foetal body and potential external threats. The viscera, like Wilson's fauces, are attempting to "question, solve, control, calculate, protect, and destroy" (Wilson 2004: 82). Perhaps our gurgling, brute, biological substrate is *also* socio-affective. This is gut sociality, as profoundly material, at work.

But this leads me to my second proposal: if gestational nausea can be considered a manifestation of organic intelligence, we also need to reappraise the tendency to separate the biological from the loftier socioaffective milieu commonly attributed to human subjects. While no sufferer of morning sickness denies that the ill-feeling is biologically manifest, and while claims of psychosomatic invention are rightly called out as subtly misogynist, belonging to the same genealogy of "hysteria" diagnoses, we also have to acknowledge that there is something more than "merely" biological going on here. Is it irrelevant that morning sickness circulates primarily in the place most associated with affective sociality (i.e. the gut)? Moreover, is it mere coincidence that it is brought on precisely when a body is opening up her corporeal space to another? At the same time as the inexplicable biological processes of nausea and vomiting are at work, a profound affective and social transformation is underway—and *in the very* same place. Here, morning sickness becomes a form of "bellybuttoning" whose (albeit ambiguous) relation to other forms of gut sociality is underwritten by this sharing of corporeal space.

In fact, gestational nausea is not entirely unlike the queasiness I feel in other daunting social situations: going to a job interview, or meeting up with a once-upon-a-time crush. Gestational nausea can be a similar sort of nauseous feeling, just pushed to a debilitating extreme. "Anticipation" and "trepidation" are words that come to mind in both instances. Both evoke a visceral dis-ease that is also social. This tentative comparison suggests that gestational nausea might also be a question of *intersubjectivity* and affective directedness-precisely of the kind that Leder claims eludes the recessive body. Morning sickness is not just a question of organs solving physiologically-oriented problems, but also a question of coping with the anxiety and ignorance that can accompany the transition from one body to two. In a sense, while early studies of NVP that attributed this affliction to cultural factors, including gender role pressures, are now largely ignored as off-base,²¹ they may have been on to something in their suggestion of the complex interplay between biology and culture, or at least between what is biologically manifest but also culturally mediated (even if this

author, too, is happy to leave the condescension of some of these studies in the forgotten past). Regardless of the degree of nonchalance of any expectant maternal body, the events of pregnancy and childbirth are always semiotically charged. This does not mean that NVP is psychologically fabricated, but only that the organic sociality afoot here is responsivity on more levels than one.

To put it otherwise: as an example of organic problem solving, morning sickness is a clear instantiation of gut sociality. But our understanding of gut sociality deepens even further when we acknowledge that gut sociality is not *only* about organic communication at a substratum "beneath" the level of human subjectivity, but *also* about the complex circuits of responsivity at play between the biological substratum and the human subject, *and* between the human and the cultural world, *and* between the organs and the cultural world—all knotted together in the gut. Gut sociality shows up the natural or biological as inextricable from the cultural or (commonly) "social." As Donna Haraway would say, gut sociality is "turtles upon turtles of natureculture, all the way down" (Haraway 2004, 2).

In an early public articulation of some of the ideas I am suggesting here, Florentien Verhage provided an incisive response that suggested a schematization to some of my provisional thoughts. "Gut," she noted, in my paper seemed to refer to three different things: a general bodily location, home to bellybuttons and morning sickness; "guts" as a general moniker for messy biological viscera; and "gut" as a synonym for instinct and affect, such as we invoke in the expression of "gut feelings." While I had not categorized my thoughts in that way, I was impressed by the order that Verhage was able to impose on them. Now, having more time to reflect on this, I am more curious (without rejecting the helpful insights of the commentary) about the work that such schematizations do. While Verhage's schema underlines the distinct ways in which we think about guts, this same schema also ironically reminds us of the way in which these three ideas are bound to one another in our imaginaries of embodiment. As such, the next question one poses might be "which meaning of gut do you mean?"but this question only reinstates the hierarchical compartmentalizations, whereby we have visceral disappearances, affective experiences and (brute, inert) bodily "stuff," all largely separate. Phenomenology can help us get under schematizations; to problematize them and reveal their inadequacies. In this phenomenology, then, I am more interested in asking: what is it about these three different facets of gut-ness that magnetically pulls them together? I want to explore how all of these bodily experiences are interimplicated, and largely *ins*eparable (except via sedimented categorizations). In another interweaving of the material-semiotic, it cannot be coincidence that we refer to all of these things in terms of the gut. Nor is it coincidence that they all find a common corporeal nesting place.

4. On Method: Toward a Posthumanist Feminist Phenomenology

When I began this study, I had a gut feeling that morning sickness might be a meaningful situation to think with. But if it was, then I had a problem: even though this experience was closer to me than my own skin-indeed, completely enveloping me at times- my comfortable human-scaled way of being-in-the-world would only allow me to get so far into gestational nausea. The phenomenological methods I had been trained in depended upon being able to access the vicissitudes of bodily life, in its various modalities: cognitive, motor, perceptual, affective.²² But the recessive body described by Leder remains ipso facto beyond this access. Above, I aim to nuance the way in which Leder characterizes the disappearance of the viscera, and the experience of pregnancy along with it. But at the same time, the general contours that Leder sketches move in a phenomenologically sound direction: the workings of the viscera and other aspects of the recessive body are less readily available to me than other surface embodied phenomena. Although I am certain that the disappearance is not as complete as Leder would have me believe, gut sociality is still at the outer reaches of what my human-scaled self can render sensible. Here I agree with Leder: NVP grips me, wrenches my gut in its grasp—but as soon as I try to make this experience explicit, so that I might analyze or even carefully describe it, it slips away again, carried off on the cloud of my discombobulating visceral discomfort. In some ways, I understand this affliction no better than the doctors do. Visceral life appears to us in qualitatively different, more nuanced and complex ways. We can access it, but this access requires some work. So the questions that faced me were: How could I take my phenomenological attention into the inner workings of my viscera? What sort of methodological manoeuvres would allow me to get right up inside my gut? In order to phenomenologize this experience-that is, to go "back to the thing itself" with any sense of critical bracketing that would hold my sedimented understanding of the

phenomena at bay, I would need to find a way of gaining access to the subtleties of this experience.

Paradoxically, the answer to my questions seemed to lie in the same discourses that cordoned off the biological substrate in the first place. While lived experience certainly reveals that *something* is going on in the guts of those who suffer from morning sickness, getting a grip on what that something is, for this phenomenologist at least, required recourse to the medical literature. I needed science to help explain to me the anatomical links between my digestive track and the hormone levels in blood. I needed science to sketch out for me the changes underway, burrowing into my endometrial tissue. This knowledge provided not only a vocabulary, but a "helping hand" in honing in on these subtle phenomena. For instance: if I knew that my levels of HCG – the pregnancy hormone – were elevated, how might that attune my attention to my viscera in certain ways? Or, if I could grasp the specific mechanisms of emesis – i.e. a marked reduction in gastric tone and motility, followed by a retrograde contraction that moves the contents of the small intestine into the stomach, followed by relaxation of the gastroesophageal sphincter to allow passage of gastrointestinal contents up and out through the mouth (in short : how vomiting happens) - how might these details attune my attention in certain ways? Could these scientific discourses be the amplifier I was looking for?

The relationship between scientific knowledge and phenomenology is complex. Certainly, the founding thinkers of the phenomenological tradition often drew on contemporaneous scientific experimentation results as a way of framing their explorations-Merleau-Ponty's work is a particularly notable example of this practice. Contemporary scholarship under the rubric of neurophenomenology and naturalized phenomenology (including the work of scholars such as Francisco Varela, Evan Thompson and Shaun Gallagher), is a current example of an even further intertwining of the scientific (including the clinical) and the phenomenological. Other thinkers, such as William E. Connolly, bring embodied phenomenology closer to science by articulating the connections between thinkers like Merleau-Ponty and Deleuze—suggesting that Merleau-Ponty's phenomenological accounts could be folded into those of neuroscientists as a way of deepening the reflections of both (180). After all, the voracious appetites of our intestinal flora, the chemical signals passing between our endocrine system and our moods, or the acute thirst felt by an inadequately watered kidney-all such phenomena impinge upon our being in the

world, and are thus as phenomenologically significant as crossing a bridge or throwing a ball. But if we want to phenomenologize such situations, the more traditional methods of phenomenological attunement bring us up short.

Such transdisciplinary experiments are undoubtedly nudged forward by the hurtling speed of progress and change in the domains of science and biotechnology. These advances alter the landscape of knowledge tools available to us through which we might disclose the world. But, more significantly, I want to underline, these advances actually alter the way in which we experience embodiment in that same world. For instance, in a quote from Drew Leder, cited above, we noted how Leder cordons off the visceral body from the surface body precisely because he claims we cannot perceive the depths of our body. But with the help of advanced biotechnologies, this is changing, and it is inaugurating new configurations of the "embodied I." In order to entertain the possibility of this claim, though, one has to agree that the experience of embodiment-that is, how we exist and understand ourselves as embodied beings-is not some inert, static, enduring sort of truth.²³ At the present moment, in the twenty-first century, we are increasingly living our bodies as fragmentable, augmentable, extendable, and intelligible in ways that are mostly new. Organ transplantation, biobanking and assisted reproduction fragment our bodies in new ways, putting pressures on commonly held notions of bodily integrity.²⁴ At the same time, we are becoming increasingly aware of our embodiment as intimately imbricated in and invaded by our environmental others – animals, bacteria, toxins, and the like.²⁵ The insides of our viscera are now available to us in microscopic detail, and we can track the remnants of our psychopharmaceutically enhanced urine, dispersing through our local watersheds and beyond. But again, these are not changes extraneous to our lived embodiment. The ways in which we understand what it means to be a body, the cartographies that our bodies chart, and our inextricability from complex webs of relation are all *lived* by us, in phenomenologically relevant ways. The miniature videocamera inserted down one's throat creates a new relation to one's stomach than one might have previously had.²⁶ The implantation of another person's kidney shifts and radicalizes the experience of intersubjectivity in significant ways.²⁷ Today, the "I" is both technological, and ecological, connected up with other bodies of all kinds, and lived at diverse levels of sensory perception. The question then is: to what extent is embodied phenomenology, and feminist phenomenology in

particular, equipped to deal with these changes? Merleau-Ponty taught us that existence *is* embodiment—that we only know the world through our experience of being embodied. But what do we do when that experience begins to significantly shift? How might our phenomenological methods be revised to be adequate to this new experience?

In other words, can we still rely on a journey "back to the things themselves," on close and careful attunement to embodied experience, on extended first-person description schematized across matrices of meaning, to make sense of this new way of being embodied? If we are now experiencing our bodies in both increasingly diffuse *and* increasingly fragmented or microscopic ways, any methodology that relies on bodily experience is going to have to morph in order to accommodate this changed experience. Ulrich Beck, for example, notes that many of our contemporary embodied experiences "require ...the 'sensory organs' of science – theories, experiments, measuring instruments – in order to become visible or interpretable" (cited in Alaimo, 19). Feminist theorist Stacy Alaimo, drawing on Beck's work, suggests that "syncretic assemblages" of knowledge²⁸ are needed to understand the ways in which our bodily matter is implicated in a world that cannot be adequately grasped through one method, or one school of belief, alone (19). Even if Alaimo herself insists that the "trans-corporeality" she describes is "not a phenomenological ... stance" (2009, 23), I think this surmisal both underestimates the value of phenomenological description, and also instates too wide a gap between the attunement of phenomenologists and that of natural scientists to the wonder of the world. In short, I believe scientific knowledge and phenomenology can be one of these syncretic assemblages.

In his assessment of our recessive embodiment, Leder points to the advent of biotechnological interventions in our visceral or inner bodies as well: sphygmomanometers allow us to "access" blood pressure, x-rays allow us to see our lungs, the lumen is made visible via colonoscopy. For Leder, however, the key point is that "the absences that haunt my bodily depths are not effaced by these reflective maneuvers" (44). In other words, while the readings of such apparatus are visible to us, for Leder they do not join up in a meaningful way with our *experience* of our insides; the absences persist. I would like to move in a different direction, where the experience of pregnancy is again instructive. My move insists that we recall the co-constitution of nature and culture, of imagination and matter. Our experience of the body-as-lived is never simply given, and is rather mediated by the categories, ideologies and explanatory tropes we use to get a grip upon material experience. Leder does not dispute this: in a footnote to this section, Leder notes that our Western schemas of understanding "the visceral body" as discrete organs "inside" a body may contribute to their disappearance from our powers of perception; he suggests that other systems of knowledge, such as Taoism and Buddhism, may be better equipped at bringing their not completely absent, but rather exceptionally subtle, appearance to us into focus.²⁹ In other words, what Leder acknowledges and what I hope to draw out even further is that once the mediating tools of biotechnology are brought into our sphere of experience, they cannot help but impinge upon the ways in which we experience ourselves and our bodies. There is no "pre-mediated" state to get back to here: language, custom, and technology *all* mediate our experiences, no less than the specific powers of our primate retinas and optic nerves mediate what we are sure we perceive.³⁰ And if this is true, then it follows that our experience of the bodyas-lived is not immune from the structures of our various imaginaries. The visual landscape that opens to us through biomedical imaging technologies and other types of monitoring and assessment apparatuses *changes* how we actually experience our bodies because we take on these schematizations, and integrate them into our ways of being in the world. The absence of the liver that we experience as absence, so persuasively documented by Leder, does shift when a blood sample narrates the function of my liver to me. Similarly, an ultrasound that re-presents to me a kicking, reaching foetus with a pumping, pulsing heart shifts the ways in which I perceive the subtle movements in my abdomen-just as knowledge about emesis shifts the queasy sensation that may accompany them.

This is not a failure of phenomenology to "get back to the things themselves;" it is rather an admission that the structures we uncover always maintain a degree of contingency. We thus need to account for the various mediations that always accompany our phenomenologizing. In this case, with care and subtle attunement, I can move my breath through my visceral core, honing in on the place where my liver lives, or I feel the pang at my pelvis no longer as an indeterminate stab but as a hand, or a foot, communicating—but scientific knowledge might help me achieve this subtle attunement. As with all habit, the ongoing layering of technologically mediated knowledges upon our bodies must be accounted for. As Foucault taught us decades ago, we can't just decide *not* to take such knowledge into account – it has already disciplined us, for better or worse.³¹ So why not use this knowledge in the

phenomenological method as well?

But in calling on such amplification, we have to ensure that the mediations of scientific knowledge are *necessarily* in conversation with my other ways of knowing the world, both exteroceptive and interoceptive. A laproscope, or a clinical trial, or a report on mercury levels in my soil, does not invent the sociality going on in my gut—I can feel the various subtle ways that it travels through my being. Measurements may occur in laboratories, but the phenomenon is already there, burrowed in my flesh. These conversations, these reciprocal but always imperfect dialectics between scientific knowledge and phenomenological attunement. Phenomenology, moreover, can be approached as a key tempering of scientific discourse that tends to objectify and instrumentalize the focus of its study, keeping this discourse alive to the "wonder in the face of the world" (Merleau-Ponty 1962: xiii) that grounds phenomenology, but which is also is likely the original impetus for most scientific inquiry.

When such "wonder" is brought together the serious acknowledgement of the biological substrata that one finds in science, this can shift the experience of our own humanness. The edges of our discretely bounded selves begin to blur, and our skin becomes increasingly transparent. In other words, while phenomenology may not require this amplification, I argue that this resource contributes to a posthumanist frame of understanding that can enhance, rather than annul, phenomenology's insights into what it means to be human. This enhancement can also be distinctly feminist. Feminist phenomenologies have long disputed the phallogocentric myth of Man, individualized and omnipotent, at the centre of the world. It follows that a posthumanist frame might bring such challenges to an even deeper level. The relational ontologies of gut sociality, for example, invite us to rethink the privileging of the human over the morethan-human, or the cultural over brute matter. Such explorations might invite further investigation of how such hierarchies are coexistent with the logics of phallogocentrism.

But such methodological experimentation is not without risk, and here I would like to assess this risk in specifically feminist terms as well. As phenomenologists well know, there is a danger that scientific paradigms will eclipse the experience of lived bodies. Scientific schematizations can overtake the body-as-lived, in all of its fluctuating and interpermeating complexities. But earlier in this paper I underlined my commitment, as a feminist phenomenologist, to paying attention to the body, and as a feminist I am also attune to criticisms of biological and other scientific thought on additional terms, namely, that it can wrest this knowledge and power from us, by congealing, reifying or essentializing aspects of our embodiment in ways that incarcerate and oppress us. We know that treating science as the new, all-knowing god can have disastrous effects, not only epistemologically but also practically, in the lives of women, people of colour, indigenous peoples, queer people, people living with disabilities, and others.³² In this context, the feminist stakes of handing the reigns over to science are quite high. While phenomenologists in the tradition of Merleau-Ponty distinguish their work from empiricism because of the latter's claim to absolute and unambiguous truth, the feminist tradition I am invoking here is more concerned with the false objectivity of empiricism, and the power of the purportedly "neutral" scientific knower to determine the fate of those bodies it marginalizes.³³

But while there is much truth in the sentiment that feminist accounts of embodiment seem to have been "brokered through a repudiation of biological data" (Wilson 2004: 70), there is another story to be told about feminism's engagement with science as well. It should come as no surprise that feminists have also done a considerable amount of the dirty work in slowly chipping away at the pervasive sets of binaristic dualisms (women/men, nature/culture, civilized/primitive, etc.) upon which masculinist humanism was erected. Feminists have been at the forefront of dismantling these binaries, because *it was politically necessary for* survival-for women and other marginalized bodies that were positioned on the wrong side of this sedimented divide. This has also meant, then, a long and persistent (if sometimes disavowed) tradition in feminist thought of refusing the separation between the natural and the cultural, of the materially "real" and the semiotically constructed. In constructing the genealogy of my own inspirations in developing a feminist posthumanist phenomenology, I look to those feminist thinkers who enfold scientific discourse into their scholarship precisely because it is a way of *resisting* the ways in which science has been used against us. Anne-Fausto Sterling on bone density, Donna Haraway on evolutionary science, Evelyn Fox Keller on genetics, Karen Barad on quantum physics, Stacy Alaimo on environmental toxins-this is just the bare beginning of a long line of debts. While we should be sceptical of the dangers that lurk in current turns towards "new materialisms," the natural sciences and posthumanism, we also have much to gain. As Elizabeth A. Wilson writes, "by engaging so little with the vicissitudes of biological systems, feminism is closing itself off from a vibrant source of political agency and energy" (2008: 390). It is clear that even as we are wary of the dangerous power that the discourse of science holds, we cannot afford to ignore it. Innovative and liberatory understandings of embodiment must continue to investigate how viscerality and intersubjectivity, how the biological and the cultural, how the outside and the inside, are all co-imbricated.

Taking these risks into account, then, the feminist partnership between phenomenology and science that I am advocating is as cautious as it is enthusiastic, as critical as it is creative. In enfolding scientific knowledge into our phenomenological accounts, we need to remain vigilant that this is a means of *amplifying* our otherwise difficult-toperceive embodied experiences, thus refusing to put the horse before the cart. To amplify is neither to corroborate, nor justify—nor certainly to set the bar. It is rather a rendering of an experience more accessible, more graspable, more intelligible, in an ongoing and imperfect conversation. These enfoldings are as ethical and political as they are descriptive.

5. Punctum and Possibility

In conclusion I would like to bring us back to where we beganboth in the context of this paper, and in the context of our own gut-facilitated beginnings: the bellybutton. In the section in which he discusses foetal life, Drew Leder also states that "my very being alive refers me back to a necessary, though elusive, point of origin. Its traces are imprinted upon my body in the form of a navel" (60). In making this claim, Leder hopes to further substantiate the *im*possibility of connection with the recessive body. Once again, however, I will take Leder's observations in another direction. I want to ask: What if we gazed upon our navels—upon this "imprint"—rather as a site of possibility that is opened up in and through our guts? This fleshy knot is the very anchor of my material-social existence. It refers me back to a maternal debt that I cannot forget, precisely because of its imprint in my material flesh. Starting from this material-semiotic knot, I work inwards, and outwards. And again, it is no coincidence that it is here, in this navel zone, that new, other-than-cognitive knowledges are born, and other-than-human relations are forged. The bellybutton is a healed puncture-perhaps the "punctum" that Chela Sandoval describes, following Barthes, as "that which

breaks through social narratives to permit a bleeding, meanings unanchored and moving away from their traditional moorings." For Barthes, she notes, this is a "gentle hemorrage" (141).

The bellybutton no longer gapes, but it still serves as a material reminder of this beautiful wound, a never-fully sealed portal between my inside and my outside, between my debts to a past and my still unfolding gifts to a future, between what I know and what I don't. This is a fitting site for the cultivation of gut sociality—that is, the fastening together and pulling apart of all kinds of bodies, in a responsivity that moves in, around and through my belly. But it is also a fitting site for acknowledging the invisibilized forms of sociality that our schematizations, methodological sedimentations and persistent humanist prejudices fail to notice.

Trust me; I have a gut feeling.

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Notes

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² As semiotician Charles Peirce explains, indices are a type of sign that "show something about things, on account of their being physically connected with them" (Peirce 1894: §3 ³ See Irigaray, *je, tu, nous: Toward a Culture of Difference* (1993).

⁴ Or, even more specifically, "Club Placental Mammal." The ways in which bellybuttoning, or other forms of gut sociality, inaugurate webs of relation and difference within the more-than-human animal world are the subject of another paper. ⁵ Interestingly, according to Tantric thought, the Navel Centre absorbs, transforms,

balances and distributes chi energy (life-force) from both the macrocosm (Heaven and Earth Chi) and the microcosm (the other centres and organs within our body) (Chia 174-178). Again, the bellybutton seems to function as a mediating portal between outside and inside.

⁶ As this etymology traces back to Sanskrit, Proto-Indo-European and Avestan, this association holds not only for English but extends to European and Middle Eastern languages as well. "Navel" has a secondary sense of "centre" in most Eastern languages. ⁷ For Haraway, a material-semiotic knot is a material thing or body that is potently charged with symbolic meanings in a way that opens up a lively site of socio-cultural interrogation. Since such phenomena do exist and are lived, they are different from tropes or (mere) metaphors. See Haraway, *Companion Species Manifesto* (2003).

⁸ This phrasing, and indeed my project here in general, is indebted to and in part inspired by Elizabeth A. Wilson's work on "gut feminism" (2004), where she asks what "anatomy (specifically the gut) can know" (70) and suggests that "gut feminism" is "a feminism that can think innovatively and organically at the same time" (86).

⁹ For a recent argument that gathers scientific and philosophical evidence for social relations in the more-than-human world, see Olkowski, "Politics -The Highest Form of Philosophy?", in particular her commentary on Henri Bergson (2012).

¹⁰ I am aware of the echo of Deleuze and Guattari, and their understanding of what it means to be a body, in this provisional definition. However, while both deleuzian bodies and my conception of sociality share the capacity to affect and be affected, here I hope to stress the idea of responsivity, in particular, such that sociality moves toward the domain of the ethical, and not only the ontological. For a discussion of material sociality as the precondition of ethics in the interhuman world, see Chandler and Neimanis, forthcoming.

¹¹ While posthumanism has come to mean many things on our contemporary critical landscape, I am drawn to Karen Barad's statement that posthumanism might simply be "a refusal to take the distinction between "human" and "nonhuman" for granted" (2007: 32). This view is neither a denial of the human nor a collapsing of the human and other bodies. On the contrary, such a view allows us to account for the specific location and capacities of the human in more responsible and critical ways.

¹² Ferenczi discusses organic response to trauma to illustrate his point, while Wilson elaborates the "problem solving capacities" or our organs and physiological matter in the instance of vomiting in eating disorders as another instructive instance. See Wilson, "Gut Feminism" (2004).

¹³ This mode of thinking has key implications for feminist theories of embodiment, as Wilson underlines: Ferenczi's use of an analysis of materialization reveals "the plastic nature of all organic substrate. In so doing, he generates a schema for feminists wanting to think about biological substrate as another scene, rather than as bedrock" (2004: 77-78). I will return to these implications near the end of this paper.

¹⁴ See Deleuze and Guattari, *A Thousand Plateaus* (1987), Lingis, *Dangerous Emotions* (2000), Haraway, *When Species Meet* (2008).

¹⁵ See Alaimo, *Bodily Natures* (2010), Simms, "Eating One's Mother," (2009), and Neimanis, "We are All Bodies of Water" (2009).

¹⁶ For example, Elizabeth A. Wilson again turns to the work of Sandor Ferenczi to elabourate the specific geocorporeal significance of the fauces—the apperature that "connects at the upper end with the mouth, nasal passages, and ears and at its lower end with the esophagus." In Wilson's discussion of how the body of the bulimic "rewires" the empathic circuits between extracorporeal social events, mood and digestive organs, it becomes significant that the fauces is located particularly where it is, in order to "problem solve" in specific ways: "Much more than the front of the mouth or even a little lower down into the esophagus itself, the fauces is a site where the communication between organs may readily become manifest" (2004: 80).

¹⁷ In looking at Leonardo Da Vinci's iconic drawing of the Rennaissance Man, we note that the centrality of navel geography is echoed in this classical corporeal geometry lesson as well: all lines spanning the diameter of the outer circle intersect at the bellybutton.
¹⁸ For further details on Merleau-Ponty's concept of chiasm, and of the intertwining of our bodies and the world, caught up in a mutually determining element that Merleau-Ponty calls "flesh," see "The Intertwining-The Chiasm" in Merleau-Ponty, *The Visible and the Invisible* (2000).

¹⁹ See, for example, Irigaray, "The Invisible of the Flesh," (1993), Young, "Pregnant Embodiment" (1998) and Steingraber, *Having Faith* (2001).

²⁰ Is it possible that the elaboration of gut sociality might also help us theorize foetal agency—material and active, yes, but not *human*—in ways that resist an automatic ascension to anti-choice positions? This will be the subject of another paper.
²¹ For example, see Wolkind and Zajicek (1977)

²² I refer to the method of body hermeneutics, developed, practiced and taught by Samuel Mallin. See Mallin, *Merleau-Ponty's Phenomenology* (1979) and *Art Line Thought* (1996).

²³ For example, we can already trace a change from a nineteenth century "ecological" understanding of embodiment in the west, as documented by environmental historian Linda Nash, to the dominant twentieth century experience of ourselves as discretely bounded individuals, that emerged in tandem with the body imagined in western allopathic medicine that saw disease as intrinsic to an individual body and isolatable body parts (Alaimo 2010, 90). Rosi Braidotti invokes the concept of "organs without bodies" to

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describe the liminal space of the late twentieth century where bodies stopped being more than the sum of their parts, and instead those parts (a womb, a kidney, a heart) were rendered increasingly detachable, fragmentable, alienable through biotechnology (Braidotti 2011).

²⁴ See Blackman, "Bodily Integrity" (2010).

²⁵ See Alaimo, *Bodily Natures* (2010) and Simms, "Eating One's Mother" (2009).

²⁶ See Sawchuk, "Biotourism, Fantastic Voyage and Sublime Inner Space" (2003).

²⁷ See Waldby, "Biomedicine, Tissue Transfer and Intercorporeality" (2002).

²⁸ While syncretism is a term most often used in relation to religion—as the mixing and melding of different schools of belief—it has also been used in relation to politics and art. A useful analysis of the term comes from Greek scholar Vassilis Lambropoulus (2001), who describes syncretism as "the agonistic yet symbiotic coexistence of incompatible elements from diverse traditions" and notes the particular viability for such a theoretical concept in a multicultural and global world.

²⁹ Leder hints, however, that such Eastern knowledge would also be a matter of training not unlike my suggestion that we can hone or train our phenomenological attunement (paradoxically) by using the knowledge of the very systems that also obfuscate the appearance of visceral sociality to us.

³⁰ Donna Haraway, "Situated Knowledges" (1991).

³¹ Such discipline is never absolute, and opens its own spaces of resistance.

³² Donna Haraway, "Situated Knowledges" (1991).

³³ See Haraway, "Situated Knowledges," (1991) and Code, "Taking Subjectivity into Account" (1993).