The Way of the Flesh:

Life, Geopolitics, and the Weight of the Future

Abstract

How can a feminist materialism problematise the knowledges and practices of geopolitics, and locate new objects for critical analysis? Building on a substantial body of work on bodies and embodiment, I draw out how flesh has traditionally been deemed problematic in geopolitics, before briefly turning to how an accounting for flesh as a socio-spatial material has helped to animate a critical approach to this field. My concern is to caution against the devolving of the flesh into an ideologically saturated matter, and to reclaim its excessive, lively character. I thus outline how the geo- in geopolitics can be understood as an 'earthiness' that is concerned, at the broadest level, with differential orderings of and access to life, and especially the matters of sex, sexuality and reproduction; and, more specifically, with a concern for differential renderings of a corporeal vulnerability and obduracy; and, the articulation of these *alongside* the building of a practice-based ethics. Using the example of stem cells, I demonstrate how an emphasis upon flesh as an object of analysis does not eschew the socio-spatialities (whether topographic or topological) that help comprise one of geopolitics' traditional *foci* – borders – but provides for an ontology of materials and forces that provokes these.

Key Words: Geopolitics, feminist analysis, flesh, stem cells, maternal anxiety

Introduction: Geographies of the Flesh

I want to address a particular object of analysis – flesh – concerns over which have played a crucial role in the development of what many consider to be a 'classic' geopolitics. Geography's grand strategists (recently brought back to life by Robert Kaplan [2012]), were obsessed with the 'upwelling' of the flesh and the need for its containment. At home and

abroad the flesh was to be quelled via a combination of reasoned discourse and industriousness, the *cordon sanitaire* and purification, and the development of military rules of engagement alongside the use of armaments (such as the dum dum bullet and aerial bombardment) that were blunt enough to 'shock' especially unruly flesh into quiescence. To be sure, this marking of the unruly potential of flesh can be traced further back to the burning of carnal bodies in the witch hunts that cauterised Christian Europe, and a middle-class dismissal of feeble minds in feeble bodies in the 18th century, manifest in the denotation of inferior physiognomies and sensibilities, as well as the reasoned triumph of human understanding over the visceral. All of these fleshy geographies and more can be invoked in a discussion of the emergence of Westphalian state ideals, the gathering pace of colonialism and imperialism, the taxonomic renderings of a natural history, the rapid prototyping of capitalism, and the crowding of urban populations. Indeed, it has been argued that the metaphysical as well as political foundations of the West – foundations taken time and again to be both originary and globally relevant – are predicated on a parting of the flesh (Hooper, 2008).

I do not want to intimate, then, that an 'ordering' and 'sorting' of flesh was introduced with classical geopolitics. Rather, that in the assembling of geopolitics as a field of knowledge and an arena for statecraft – a knitting of the ideational and the performative that was itself a particular murmuring of the flesh – an intensification of extant tendencies took place, wherein flesh was to become simultaneously *immanent* as part of an all-encompassing Nature, and *malleable*. Flesh was there to be experimented upon, explained, mapped and put to use, but also to be fought and risen above. As Richard Peet (1985) explains, geopolitics was firmly undergirded by the rapidly systematising discipline of biology, and geography's politicians sought to ground their work as scientific via reference to prevailing evolutionary ideas on both race and conflict, thereby helping to legitimate the conquest of some societies by others. For both Rudolf Kjellén and Ellen Churchill Semple, for example, the adoption of their teacher Friedrich Ratzel's organic theory of the state, which strove to advance in the face of intense competition, was key. This sustained racialization of humanity, again, can be traced back over time and space. But, it is in the mid to late 19th century Europe and the US that a systematising explanation for the relations between such groupings, and their relation in turn with the environment, is proffered under what came to

be called at the turn of the 20th century (as a critique of such ideas) social Darwinism. A racialised reading of Darwin's theory of natural selection, alongside an apocalyptic reading of Malthus' overpopulation model, helped to facilitate, and legitimise, a welter of body-centric legislation (addressing reproduction as well as migration) aimed at purifying the flesh.

Whilst a neo-classical geopolitics continues to nod towards Malthusianism, as well as conflict as an inherent condition, and the use of 'extreme measures' (such as torture, assassinations and drone strikes) against the flesh as part and parcel of a *realpolitik*, the clash of race has become the clash of civilisations (Huntington 2002). Reason and rationality emerge, it seems, from the 'social' realm of an *in situ* cohort rather than the biological realm. Nevertheless, the key contributions of a post-1980s *critical* geopolitics has been, on the one hand, to critique this realist universalising of a competitive human nature and, on the other, to query the abstracting of ethnicity, religion and political ethos in the search for explanation. Some have identified decidedly non-realist movements and efforts that give lie to these assumptions. Gerry Kearns (2008), for example, whose work addresses the writings of Kropótkin, Kingsley, Hobson, and Reclus, describes these as 'progressive geopolitics,' insofar as they take on board the notion of a global interdependency but, in contrast with realism, assume a generosity of spirit, manifest in the work of solidarity in face of oppression, and the fundamental claims of human rights. Indeed, what these examples afford an insight into is the breadth of choice available as to how the geopolitical was to be framed and deployed at the state level: that one hegemonic understanding of the same was to emerge under the guise of realism is testament to the fact that geopolitics did not so much serve a 'national interest' so much as reflect prevailing inequalities of privilege and resource, pander to particular forms of prejudice, and facilitate certain economic interests.

Small wonder, then, that politically-inclined geographers have inquired into who benefits from the operation of statecraft; and, have looked to the power–laden entanglements of states and capitalism, for example, as well as state and whiteness, and state and patriarchy. These efforts have been well reviewed elsewhere (eg. Dodds et al. 2013). In pursuing such questions, geographers have become wrapped up in describing the 'situatedness' of seemingly individual actions, such that the notion of the sovereign self (including that of the researcher), alongside the notion of the sovereign state, becomes problematized and hence

de-centred. In his thoughtful and far-reaching 1994 article on gender and geopolitics, for example, much influenced by developments in a feminist International Relations (IR), Simon Dalby contends that (seemingly individual) human bodies are bearers and begetters of social relations, but are also the site from which reflective, albeit partial, knowledges pertaining to the same are produced. The flesh, one might add, is no longer simultaneously immanent and subject to manipulation from a putative outside; it is an agential, social material.

In regard to the evolution of an Anglo geopolitical theory over the 1990s and into the new millennium, an exploration of the making and unmaking of social bodies, and the making corporeal of gender, as well as race and class, has gathered pace. And, for the most part, it is the situatedness noted above, and the ideologically-saturated, materially-constituted 'where' of actions (such as public/private, centres/margins, and the liminal zones between these, such as the subaltern) that has been referenced by the prefix geo-. Indeed, a *geo*politics has arguably become a matter of inquiring into socio-spatial relations, in the form of encounters, conjunctions, engagements, negotiations, resonances and congruencies, as they become manifest in borders, boundaries, territories, terrains, and, more recently, volumes.

There is no doubting that structuralism, in whatever guise, has had a crucial role in this de-centering of both the sovereign self and the sovereign state, as the social has been picked apart in the search for routinized relations, and their import.[i] But also, the making of such a body politics has ensued from the extension of feminist analyses of embodiment to the role of the state therein. What emerges from the latter is a redistribution of the self as socially situated, certainly, but also a fleshy corporeality that is: the target of inscription and enrolment; the site of resistance to the same; the locus of myriad struggles to realise equal access to liberal notions of rights to the body, such that access to the flesh becomes possible as a choice by the self; and the marker of all manner of politico-ethical systems that contest and rework such liberal accounts. Again, such efforts have been reviewed elsewhere (eg. Dixon and Marston 2011).

What I would like to emphasise here is that such feminist analyses of the matter, affect and meaning of a corporeality are themselves embedded within a broader feminist exploration of materiality, manifest in feminist philosophies and economics, feminist literature and

ecologies, and feminist arts theory and practice (eg. Barad 2001, 2003, 2007; Bennett et al. 2010; Braidotti 2002; Grosz 2005, 2008; Hird 2009; Irigaray 1992). Such domains are not usually enrolled (though see Yusoff et al. 2012) as part of a critical geopolitics insofar as they not state-centric, nor are they space-centric; though, I would argue, both state and space are implicitly enrolled time and again. Their concerns do not resonate with those signified under the prefix geo- by classical, neoclassical, or critical geopolitics. Instead, this is a constellation of work (not limited to academia, and by no means operating *in toto* conceptually or politically) that is concerned, at the broadest level, with differential orderings of and access to life, and especially the matters of sex, sexuality and reproduction; and, more specifically, with a concern for differential renderings of a corporeal vulnerability and obduracy; and, the articulation of these *alongside* the building of a practice-based ethics. Generally speaking, when politically-inclined geographers have dealt with this work it has been to flesh out what has been termed a 'biopolitics.'

Yet, for me, there is an attentiveness to the matter of life on earth here, and the myriad workings of power that enable, accrue to, and ensue from life, that strike a chord with a more traditional, pre-1950s accounting for geography as the study of human-environmental relations. But also, this is an attentiveness that allows scholars to sketch out an ontological underpinning to geopolitics that situates the actualisation of spatial imaginaries (whether topographic or topological) in light of the materials and forces that both enable and exceed these. To put this another way, there is an 'earthiness' to this work that eschews the evolutionary biology of environmental determinism, as noted above – one may well remember Semple's (1911) hymnist observation that 'Man is a product of the Earth's surface ... dust of her dust' – but that does not devolve flesh so easily into a social material. There is an attentiveness to the social construction of biological knowledges, certainly, but also an acknowledgement of the anthropocentrism (a 'for me-ness') that underpins ontologies predicated upon difference, sharp-edged metrics, and the substitutability of matter.[ii]

Elsewhere, and working with Hawkins and Straughan, I have noted how such an earthiness can allow us to rethink the matter of territoriality (Dixon et al. 2012). In what follows, I want to pursue how a feminist approach to the becoming of flesh can be brought to bear in regard to another of geopolitics' traditional repertoire – borders – such that they become

'earthy.' In doing so I do not wish to deny the presence or import of a series of spatialities; rather, I want to rework once more the geo- in geopolitics in light of feminist concerns with the matter of life.

Engendering and Gendering Flesh

Borders, and the associated rules and regulations as to how, when and in what form movement across these will take place, are the very stuff of geopolitics as both a practical series of encounters and requirements between citizens and their others, and the academic subfield that critically engages these. What tends to be 'invisible' in such public as well as scholarly discussions, however, is the rapidly increasing mass of 'corporeally disassociated' flesh on the move, by which I mean living material that has been removed from the body, stored and modified to serve diverse experimental, commercial or therapeutic purposes, transported across international borders, and held in reserve in banks or processing centres for use in the laboratory, the hospital, the factory, and even the art studio.

Why look to *this* flesh? For my purposes, and in light of the above, designating flesh as an object of analysis at the very outset invites geopolitics to concern itself with the matter, or the 'what,' of such movement, and how this speaks in turn to the matter of gendered and sexed bodies. In what follows, I want to outline something of the life of the tissues 'themselves,' as they proceed to emerge into and occupy times and spaces outside of variously gendered and sexed bodies, and as they proceed to (sometimes, but largely not) become part and parcel of the same.[iii] In doing so, I focus specifically on the movement and becoming of stem cells. To posit flesh in this manner is to eschew the use of 'gender' as a particular giving of form to matter, one that revolves around the individual as complete and whole. Instead, one can think of matter as always and already having a form, and a series of capacities, that can, under particular circumstances, lend itself not only to a corporeality, but to a diversity of reproductive possibilities.

In short, my line of argument is premised on the belief that engendering precedes gendering. Such a line of inquiry poses questions as to how such tissues proceed to animate new speeds and intensities between various bodies – including but not limited to, the mother, the father, the child, the sibling, the surgeon and the patient, certainly – and both enrol and prompt diverse technologies and procedures in the process. And, further, how

such engendering is materialised not only as “a difference engine,” as Adams et al. put it, but “a futures generator in regimes of anticipation” (2009: 252).

Flesh on the Move

Given the complex regulatory geographies that allow and dis-allow stem cell research, the process of stem cell treatment requires an intricate series of mobilities and pauses, with materials crossing a series of sub and inter-national borders. It is not too surprising, then, to find that these differential possibilities for action have become a profitable financial opportunity, as investment becomes concentrated in regions such as the American ‘wild west’ wherein regulatory supervision of stem cell therapies is relatively lax. This highly diverse regularity geography in regard to stem cell harvesting, processing, storing and medical deployment has emerged as nation-states struggle to keep pace with a rapidly evolving biotechnology knowledge and practice base, whilst at the same time bring to bear cultural sensibilities on the nature of various human-derived tissues and the ethics of their manipulation and engineering.

What has become clear over the past few years is that investment capital is highly responsive to this geography, such that an extensive, international corporate structure rapidly accommodates the ‘placing’ of various practices, technologies and knowledges. And, in doing so, throws up a dynamic topological geography of affiliated clinics, hospitals and banks that depends upon a series of financial, knowledge, and material transfers. Cryo-Cell, for example, founded in 1989, has over 240,000 clients from 87 countries. Cryo-Save Group N.V. is a holding company under Dutch law, whilst Cryo-Save AG, the working company, has offices in Pfäffikon, Switzerland. Affiliates are present in 40 countries, from Colombia to Pakistan, and are composed of ‘daughter companies’ and business partners representing the Cryo-Save Group through licensing agreements. Stem cells from both daughter companies and business partners are stored centrally in Belgium, except for those from Dubai, India and Germany.[iv]

Such topologies are very much tempered, however, by a more traditional, Cartesian politics of territorial protectionism by both national and sub-national state apparatus’s. Texas, for example, because of its substantial biotechnology knowledge base in universities and hospitals, combined, as noted above, with a relatively lax set of regulations on providing

stem cell injections, is very much in competition with the Shenzhen Province of China, where the market dominance of Celltex is matched by Beike Biotech. Beike, since its founding in 2005, has grown to house the largest stem cell collection in Asia. Here, a similar combination of state finance and university/hospital funding and expertise has allowed for the rapid take-off of China's regenerative medicine and bio-medical industry. Future plans include processing and storage banks in the provinces of Guizhou, Liaoning and Henan, as well as in India and Hong Kong, housing cells derived from umbilical cord, fat, bone marrow, placenta and amnion membrane. Whilst careful to note that the centre will follow a "stringent implementation of international quality benchmarks," Beike's Vice President for Medical, Scientific and Regulatory affairs, Dr. Ying Song, also observes that this is an opportunity for China as a nation-state to achieve world leadership, insofar as, "Stem cells are the crown jewel of medical research."[v]

What has also become clear is that underlying many such ambiguities is an intense debate over the ontological status – that is, their 'place' within an organism, for example, but also as an industrial end-product and a legal proof of innovation – of these corporeally disassociated tissues. Regional competitiveness in the US, for example, is complicated by regulatory disputes between the federal Food and Drug Association (FDA) and state entities such as the Texas Medical Board. The FDA has sought to ban untrialled stem cell therapies on the basis of their failure to attain Good Manufacturing Practice, rather than Good Tissue Practice as found in the blood and human tissue transplantation sectors (Koleva 2012). Arguing that cells have been 'manipulated' before injection, such that they now constitute an engineered drug, the FDA has successfully stopped Regenerative Sciences of Broomfield Colorado from administering mesenchymal cells as Regenexx for the treatment of orthopaedic injuries (Cyranoski 2010). Regardless, the Texas Medical Board has approved draft rules that require physicians to receive approval from what it calls an 'independent review committee' before treating patients, thus paving the way for a substantive federal-state wrangle over the legality, as well as the status, of therapeutic mesenchymal stem cells.

According to Jin Han Hong, president of RNL Life Science in LA, "The government wants to define[the therapeutic mesenchymal stem cell] as a drug and make it illegal. From our viewpoint it is just part of the patient's body" (cited in Cyranoski 2010: 909). Certainly, defining the legal ownership of these is complex and at times paradoxical, and depends a

great deal on the forms of consent under which tissues were removed and the guarantees of individual clinics, but also the requirements of various national and international regulatory bodies. The storage of an individual's mesenchymal stem cells in a bank, with the accompanying expectation that these can be withdrawn for future medical use by that individual for themselves or family members, does indeed denote these as 'belonging' to a particular body. And, as we shall see below, there is a careful tracking of samples, as well as a variety of data protection policies, with the aim of ensuring a potential, future re-encounter between patient and cells.

Yet, US rules concerning the ineligibility of patenting 'life itself' have undergone several key changes since 1980, with the result that stem cells not banked under these guarantees, but otherwise donated to or bought by these same clinics and banks and modified, can be claimed under patent by virtue of the specialist, technological know-how required for their production. Moreover, because words alone cannot express this knowledge and its product, a physical example is required to be placed in a collection, such as a national stem cell bank; it remains a legal point of debate as to whether these can be accessed for research from such collections without license from the 'owner' (Isasi and Knoppers 2009; Matthews et al. 2011). In practice, what this means is that stem cell companies based in countries across the globe can, under US law, and within the territorial reach of the US nation-state, 'protect' their modified stem cell lines from competitors, at least for the duration of the patent, thereby exerting a high degree of legal ownership. To make matters more complex, patent law itself has a highly diverse international geography. In October 2011 the European Court of Justice, for example, ruled that procedures involving human embryonic stem cells cannot be patented insofar as this would violate current European law banning the industrial use of human embryos, as well as being 'contrary' to both ethics and public policy (Calloway 2011).

In regard to stem cell marketing, we subsequently see an interesting tension between claims to special expertise, as denoted by references to patented or trade-marked collection kits, screening and multiplication techniques and mediums only available at certain clinics at the leading edge of science, and a text and image-based rhetoric of the 'naturalness' of these techniques when compared with other forms of treatment. A prime example is provided by Future Health Bio, a firm established in the UK in 2002, but with offices in over 23 countries, and samples collected from 50 countries. A key selling point for their services

is that treatment involve cells taken from the patient's own body, thereby allowing for a perfect match if need be. According to the company's revelatory text:

> When a liposuction procedure takes place, the fat removed from your body is disposed of as medical waste. But what if this 'waste' held a secret that could one day help you if you became ill? ... Recently, scientists discovered that this tissue contained special mesenchymal stem cells, also known as lipo stem cells. Lipo stem cells have an ability to transform into lots of other cells in the body… So, for instance, if you were to develop a heart disease or multiple sclerosis in later life, lipo stem cells may be able to help you recover. Another reason for their growing popularity is that, because they are your own cells used to treat you, they would be a perfect match, with no problems of rejection. So, before you have your liposuction procedure, remember to plan ahead, to save and store some of those valuable stem cells. Discarding some of them may help to improve your present shape, but banking some could help to improve your future health.[vi]

Such 'natural' rhetorics are both confirmed and complicated by the intensive processing of samples. At the heart of this series of processes is a tension between the 'purification' of the sample via intensive screening measures, and its still-like 'preservation' as a natural resource for specific bodies, ready and waiting to be shipped. The sample of fatty tissue is removed from the patient by a medical technician, most often after a liposuction procedure, and placed in a pre-ordered adipose collection kit. This contains, generally speaking, instructions for collection, a sterile aspiration container, a media bag with some form of transport medium to keep the sample 'alive,' biohazard transport bags, cooling packs, return shipping documents, Styrofoam packaging and a cardboard shipping box. This ensemble has a short life term, and must be couriered to a processing clinic, often located close to an airport to save on transport time, where a series of separation, purification, marking, expansion and differentiation procedures are carried out.

Once 'purified,' cells can be cryogenically stored. For those firms selling the processing and banking of cells, a guarantee of the cleanliness of their facilities, the rigour of their sterilisation and cryogenic procedures, and the expertly trained, machine-like operation of their staff, is essential insofar as this protection against contamination and unwanted

growth maintains the 'naturalness' of these same cells. In addition, a series of identification procedures are also carried out, such that these now physically disassociated cells retain some form of connection to the larger biomass of their donor. And so Future Health Bio, for example, promises that,

> Lipo stem cell separation and preservation are carried out by specialised Scientific laboratory personnel, in accordance with strict guidelines, in the GMP clean room facility at our purpose-built sterile laboratory... Once your lipo stem cells are separated, they're placed in cryovials, with a unique bar code to ensure that they are never misplaced and can always be identified as yours. Then they're placed in a cryobox for extra protection. The cryobox is also bar coded and placed in a storage tank containing liquid nitrogen where it will sit, safe and secure, in the nitrogen vapour. Waiting for the day when your lipo stem cells may be needed.[vii]

The harvesting of mesenchymal stem cells from patients in the US and UK (and most but not all countries wherein this procedure is available) requires that a contemporaneous sample of blood also be collected, such that the presence of particular viruses and pathogens in the donor body can be located. These would signal the problematic nature of the acquired stem cells, which would not go on to storage. Importantly, they also signal a capacity of these cells that is rarely otherwise noted in such advertising web-sites. That is, it is not simply a number of stem cells that are collected in an otherwise passive sample. Rather, these cells are part and parcel of a unique ecosystem that can contain, amongst other elements, infectious microorganisms such as human immunodeficiency virus, hepatitis B virus, hepatitis C virus and human T cell lymphotrophic virus. To be sure, screening procedures can identify these, but some newer pathogens such as transmissible spongiform encephalopathies and severe acute respiratory syndrome are almost certainly missed (Cobo et al. 2005). In addition, screening can itself bring new 'contaminating' elements into play, as can the use of bovine serum and mouse fibroblasts as a feeder layer for the development of cell lines. As Caulfield and Zarzeczny (2012: 366) caution,

> Contrary to the claims made on some websites, the fact that cells originally come from a person's body (eg, blood or bone marrow) does not mean they are safe to reintroduce after they have been manipulated outside the body. For example, cell

> characteristics can change during expansion, with the result that they lose the ability to differentiate into specialized cell types or to control their own growth… The fact that cell-based transplants might survive in a patient for many years and might in fact be irreversible makes the potential risks all the more salient.

The Becoming of Flesh

In the preceding section, the 'becoming of flesh' implied revolves around the material formation of the donor/patient, but also the excessive and unpredictable growth of samples undergoing screening and processing, and the multiplication and modification of cells as part and parcel of scientific research projects, both commercial and university-led. In this section, I want to explicitly address how the becoming of flesh speaks to the issue of reproduction. I want to focus on how this geography becomes enmeshed in a redistribution of the maternal, as 'mothering' capacities and emotions are differentially enabled and curtailed. These mobile materials become infused with a 'maternal anxiety' as to the future well-being of children and family, but also, in recent years, part and parcel of a geopolitics of the flesh that seeks to educate women as to their duty in locating and insuring against risks to the larger community, and even the nation itself.

Whilst the stem cell sector deploys materials harvested from diverse biological contexts, including mesenchymal cells as noted above, the bulk of these are drawn from particular corporeal bodies that are able to offer umbilical cord blood, menstrual blood, embryonic tissues, fetal tissue and oöcytes, and that have emerged from or become enrolled in various IVF treatments, or that have been sourced in the aftermath of birth. IVF has, over the past few decades, become an ensemble of knowledges and techniques that deal with all manner of tissues in a series of treatments including embryonic stem cell research for the purposes of therapeutic intervention, but also, as Marcia Inhorn (2008: 238) describes: intracytoplasmic injection (ICSI) to overcome male infertility; third-party gamete donation (of eggs, sperm, embryos, and uteruses, as in surrogacy) to overcome absolute sterility; multifetal pregnancy reduction to selectively abort high-order IVF pregnancies; ooplasm transfer (OT) to improve egg quality in perimenopausal women; cryopreservation, storage, and disposal of unused gametes and embryos; preimplantation genetic diagnosis (PGD) to select 'against' embryos with genetic defects and to select 'for' embryos of a specific sex;

and the future possibility of asexual autonomous reproduction through human cloning. Tissues associated with female reproduction have become a valuable commodity.

There is a significant regulatory geography as to if and under what conditions this material may be harvested, ensuing in what Waldby and Cooper (2010: 3) term a "global distribution of regenerative labour." Such material," they note,

> ... is generally given for free in the advanced industrial democracies, constituted as a surplus ('spare' embryos) or waste (umbilical cord 'afterbirth', cadaveric foetuses, poor quality oöcytes) whose generative powers should not be withheld from others. At the same time, among impoverished female populations in developing nations, such biological material is now often procured through frankly transactional relations, where women undertake risky procedures for small fees (ibid.).

One of the key procedures in IVF treatment, for example, is hyperovulation, wherein hormonal treatment induces the artificial maturation of more than one egg cell, and stimulates the release of a large number of eggs in any one menstrual cycle. This treatment can have serious side-effects, including the potentially fatal ovarian hyper-stimulation syndrome. In addition, the egg retrieval procedure is intrusive, requiring a local or general anesthesia. The ensuing 'surplus,' as Jyotsna Gupta (2006: 32) observes, can be donated or sold for reproduction or for research, such that, "Within global capitalism women's cheap labour is not only used to produce for the world market, but also to 'reproduce' for the world."

These movements certainly help to enact a global distribution of regenerative labour, insofar as there is a continual transfer of materials across borders, some corporeally disassociated, some not, and largely orchestrated by a series of companies that operate between and betwixt a differential regulatory geography. But, it is also important to note how these movements are both enabled by, and allow for, a 'distribution of the maternal' as a particular biological capacity is infused with particular expectations around the subject-formation of a dyadic mother-child relationship. To be sure, for those selling or donating eggs and oocytes, the capacity for reproduction becomes dis-placed, and this has led to extensive and critical media commentary on the impacts of 'baby farms,' wherein wealthy women are able to gain an emotional as well as biological motherhood at the expense of

donors. What is also usefully brought to bear upon a geopolitics of the flesh, is the weight of maternal anxiety placed upon the provision of stem cells, both as a private therapeutic resource for family use, and as a service to community and even the nation.

In surveying the advertising literatures from stem cell banks operating across the globe, a recurring thematic is indeed the responsibility and duty of the mother to locate and insurance against the risk of ill health. LifeCell International, for example, which is comprised of a network of over 50 centers in India, Sri Lanka and Dubai with plans for future offices in Bangladesh, offers the wondrously-named 'Femme' programme, by which is meant the harvesting of mesenchymal cells from menstrual blood. Under the banner, 'Celebrate the power of Womanhood!,' LifeCell suggests that,

> As women, we face multiple challenges in maintaining our good health. Childbirth, age, nutrition, domestic pressures, periods…there are so many factors which affect our body. Today, however, research shows us that those very same things are giving us a biological advantage like never before. **Only we women have the power to take care of our health in the future and that of our genetically related family members (our precious children, siblings & parents).** Yes! Our periods (those hated things) are a rich source of Mesenchymal stem cells. These self renewing cells are being researched the world over, with new and exciting possibilities for therapeutic use looming large. **These amazing cells are found month on month, in your periods. So 'those 4 days' are actually more of a monthly miracle than a monthly curse** (original emphasis)**.**[viii]

LifeCell is also India's first collector of umbilical cord blood (UCB), and this remains the largest single source of stem cell harvesting. Research into UCB therapies emerged in the 1970s, and focused on how blood-forming stem cells, hitherto taken from closely matched bone marrow donors, could develop into red and white blood cells, as well as platelets, thus proving effective in the childhood treatment of certain cancers, blood diseases and immune deficiency disorders. The quantities acquired from the umbilical cord are not sufficient for adult treatments; yet, UCB banking, which began in the US, is now a multi-million dollar industry with over 15,000 transplants worldwide by 2009 in the treatment of 45 different blood disorders (Rao et al. 2012).

The advertising tag-lines produced by companies such as LifeCell International ('possibilities, well protected'), similarly emphasise the safe-guarding of the future. And, the accompanying visual rhetorics emphasise where the responsibility for such providing such possibilities, and for safe-guarding them, lies: with the mother. The banking of stem cells is sold as part of a natural birth process; it is a practice that sits alongside the antenatal classes for expectant mothers that LifeCell also provides, which stress, "many ways to work with the labour process to reduce the pain associated with childbirth, and to promote normal birth and the first moments after birth."[ix]

Certainly, in these and similar materials on 'private' banking, maternal anxieties and responsibilities are tied to the future well-being of the child, their siblings, parents and grandparents, an unit held together by close DNA matching overlain by a series of expectations as to familial care and duty. But, recent years have also witnessed the emergence of a rhetoric of civic responsibility, as 'community' banking has become increasingly advertised, and 'national stem cell banks' have sought to increase their stocks. Trading on its reputation as a more socially aware business corporation, the Virgin Group, for example, has opened the Virgin Health Bank ('with you for life'), which offers a service wherein,

> ... you to keep a small amount of your baby's stem cells for your own family, but at the same time support your community and potentially contribute to saving someone else's life in the future. This service uses the same high quality processing, testing and storage procedures as our Family Banking service, and includes 25 years of storage…. Importantly, using this service means that your family will only retain the stem cells from the first 5ml of cord blood collected. All the remaining cells will be donated to the public through our cell donation programme. These donated units are made available to other families who require them for lifesaving transplants.[x]

Virgin Health advises that the small amount retained for family use is not enough to provide treatment, but, "over the next five to ten years cell expansion and regenerative medicine technologies are expected to become available, which may allow this unit to be utilised as a treatment on its own."[xi] Clearly, this community-orientated service is regarded as a promising business model more globally, as Rajan Jewtha, head of the Virgin Health Bank

Qatar, opened in 2009, observes that, “social enterprises can make a profit and do good. I like to think we are the architects of Arab stem cell banks2 (cited in Wadvalla 2012: np).

To a degree, this service has emerged in response to medical and pediatric criticisms of the selfishness and waste of ‘family’, or ‘private’ banking, insofar as the likelihood of these cells being used is extremely rare. The American Academy of Pediatrics (AAP), for example, observed in 2007 that many companies exploited new parent fears, particularly around ‘minority’ and adopted children, and presented misleading statistics on the potential need for what was essentially a stem cell insurance policy. In contrast, the AAP strongly advocated public banking by expectant mothers either through the American Red Cross, or their local university hospital (AAP 2007). Here, again, there is the weight of maternal anxiety, this time in regard to the future well-being of communities at large. Such rhetoric iterates the importance of educating expectant mothers as to their duties and responsibilities therein, as 20 US states have now enacted legislation (based on the Institute of Medicine guidelines) that either directs or recommends doctors to educate such women as to the benefits of therapies based on stem cells derived from umbilical cord blood.

What is more, national Stem Cell Banks have burgeoned in recent years as governments seek to advance medical stem cell research, and to build up a diverse stock of modified stem cells for therapeutic treatment. Few so far, however, have tied this effort quite so firmly into a nationalistic imperative to ‘territorialise’ these tissues as the Greece-based Stem-Health Hellas (‘the Best Stem Cell Bank in Europe’), which helpfully advises potential donors that,

> The units that are currently stored in public banks in Greece are about **2,500**, which is well below the minimum necessary of between **10,000** and **20,000** **selected** units to cover the needs of compatible transplants for the Greek population. **Certainly a donated unit could be made available and, therefore, save the life of a patient that is not Greek**, although the probability is much less (original emphasis).[xii]

Concluding Remarks

In addressing flesh I do not want to intimate that this is somehow a better way of capturing the 'building blocks' not only of geopolitical inquiry, but of geographic inquiry. Such an approach would be a 'nano-dream' predicated upon the progressively accurate observation of a scaled world that organises itself for our apprehension from the very big to the very small. Nor do I wish to be prescriptive as to what the matter of a geopolitics should be. Indeed, I take my lead from Judith Butler's double-handed observation from *Bodies that Matter*, wherein she notes, sympathetically, that "On the one hand, any analysis which foregrounds one vector of power over another will doubtless become vulnerable to criticisms that it not only ignores or devalues the others, but that its own constructions depend upon the exclusion of the others in order to proceed" (1993: 18-19). In pursuing flesh as an object of inquiry, there is a vulnerability, to be sure, to the charge that other, more worthwhile, lines of inquiry have been slighted. For me, this is preferable, however to Butler's second possibility. "On the other hand," she writes, "any analysis which pretends to be able to encompass every vector of power runs the risk of a certain epistemological imperialism which consists in the presupposition that any given writer might fully stand for and explain the complexities of contemporary power" (ibid.). There is no sympathy here for such an imperialist 'pretence.'

If I can conclude with an overwrought analogy, my intent in this article is to argue that the bringing to bear of a fleshy, feminist metaphysics, manifest just as much in art and literature as it is in IR and border studies, has the potential to radically recast geopolitics' traditional repertoire of objects. It has the potential to invade, infect, and transform the flesh of this area of academic inquiry; to eat out the body from within, and produce in turn phantom hosts and viral geographies of touch and contagion.

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[i] A critical geopolitics has also been attenuated by a *post*-modern scepticism as to the particular rhetorics of progress associated with the evolution of the nations-state, and relations between these, in the modern era. Importantly for many geographers, such modern rhetorics are critiqued as being bound up with a particular rendering of space as a two-dimensional field across which locations are sited, and processes flow and ebb, as well as a linear temporality that describes the 'rise' of civilisations, and the 'march' to equality,. Sometimes referred to as a 'Cartesian space,' or a 'grid system,' such spaces are not, critics argue, given features of the world, but a way of framing it such that particular projects that 'pin down' people to place can be planned and enacted. As postmodern theories have pointed out, both of these forms of rhetoric are immensely powerful, insofar as they persuade us as to the necessity, and even the value, of prevailing social and environmental conditions. What is more, they insist that future events are already fated.

[ii] Of course, there is a vulnerability associated with the taking on board of a term – earthiness – that has been used as a signifier for the inferiority of various cohorts over the centuries. The implication time and again has been that such cohorts have not risen above the flesh when compared with others, and so are not capable of entering into a politic community. For me, however, it invokes a sustained body of feminist work that is concerned with the import of both biology and ecology, but which takes both under critical consideration according to how and with what import such knowledges are, and can be, put to use. With regard to this latter point, I would add that such work is open to the notion of experimentation with the unknown underwriting the natural sciences, but also the specialised experimentations of philosophy and the arts.

[iii] This does not mean that gender and sex somehow become irrelevant issues; the processes by which this disassociation occurs, and the various scientific, economic and political imperatives that animate them, are differentially inflected by a wealth of social relations and biological capacities, and the manner in which these become enmeshed. One can think, for example, of the 2005 'scandal' at the world's foremost stem cell cloning laboratory in South Korea led by 'national hero' Professor Hwang Woo-Suk: ethical irregularities would appear to have encompassed not only paying women for eggs and not informing them fully of the medical risks, but also 'pressuring' junior, female members of the research team to also 'donate' eggs.

[iv] From company web-site, http://www.cryo-save.com/. Last accessed 21st July 2013.

[v] From a Bieke Biotech press release, http://biekebiotech.com. Last accessed 21st July 2013.

[vi] From company web-site, http://www.futurehealthbiobank.com/services/lipo-stem-cells?v=pricelist.

[vii] From company web-site, http://www.futurehealthbiobank.com/services/lipo-stem-cells?v=process). Last accessed 21st July 2013.

[viii] From company web-site, http://www.lifecellfemme.com/what_is_femme.aspx. Last accessed 21st July 2013.

[ix] From company web-site, http://www.lifecellinternational.com/antenatal-class.aspx. Last accessed 21st July 2013.

[x] From company web-site, http://www.virginhealthbank.com/our-services/community-banking/community-banking?t=98&. Last accessed 21st July 2013.

[xi] From company web-site, http://www.virginhealthbank.com/our-services/community-banking/community-banking?t=98&. Last accessed 21st July 2013.

[xii] From the company web-site, http://stem-health.eu/public/). Last accessed 21st July 2013.