



# Alleviative Bleeding: Bloodletting, Menstruation and the Politics of Ignorance in a Brazilian Blood Donation Centre

EMILIA SANABRIA

**Abstract** This article focuses on blood donation as a form of bloodletting in a context where donation is commonly seen to alleviate the symptoms of 'thick blood'. It deals with the gendered aspects of blood donation, and the parallels drawn between donating blood and menstruating. Women are seen not to need to donate blood as much as men, who, in the absence of menstruation, are more prone to thick blood and require a means to expunge the ensuing excess. While blood donation professionals strive to reconstruct donation as a selfless and ungendered act, counterposing the 'facts' of arterial blood circulation to local bloodlore and beliefs, lay understandings challenge this construction in the use they make of blood donation centres or by reiterating the personalistic and gendered dimensions of donation. The article explores cases of patients who use hormonal contraceptives which suppress menstruation and express concerns over the resulting accumulation of blood in the body. It considers how blood donation is adopted by some women as a means of dispelling both the perceived inconveniences of menstrual bleeding and its swelling effects. Such literalized engagements with medical technologies reveal a conception of the body as a permeable, malleable and recipient-like enclosure. These views are often characterized as 'ignorance' by medical practitioners, where ignorance is seen to derive not only from the absence of knowledge, but from the presence of the wrong kind of knowledge.

*Keywords* anthropology, blood, Brazil, humours, menstrual suppression, menstruation

---

*Body & Society* Copyright © The Author(s) 2009, Reprints and permissions:  
<http://www.sagepub.co.uk/journalspermissions.nav>  
Vol. 15(2): 123–144; DOI: 10.1177/1357034X09104112

## Blood Donation in Salvador da Bahia

In Brazil, the transition to a depersonalized and voluntary mode of collection for donated blood dates to 1980, before which blood banks were supplied by the kin of those in need of transfusions, by prisoners or through a system which financially compensated donors. Nearly 30 years on, depersonalizing donated blood and dissipating the 'myths' and popular 'beliefs' that donors are seen to associate with blood donation remains central to the way health professionals and social workers envisage their work. In Salvador da Bahia, where a majority of donors come from low-income segments of the population, donating blood is widely said to afford *alívio* (relief). This term blurs distinctions between physical relief and well-being, emotional alleviation and moral respite, as to be a donor is to be simultaneously healthy – free of disease – and altruistic. In what follows, I focus on the notions of well-being associated with donation as a form of bloodletting. For example, giving blood is seen to afford relief from the accumulation of blood in the body or from the symptoms of 'thick blood', which include physical and emotional discomfort, swelling, itching and dizziness. Drawing on ethnographic material collected as part of a wider project on menstruation and ideas of the body in Salvador, this article deals specifically with some of the gendered aspects of blood donation, and the parallels that are drawn locally between donating blood and menstruating. It is predominantly ethnographic and descriptive, raising questions concerning the coexistence of different ideas of the body in Bahia, and the use of biomedical techniques to effect changes upon bodily states. The strong association in Bahia between altruistic, disinterested blood donation and locally defined ideas of modernity gives rise to contests over interpretations of blood donation which it is my aim to explore.

Salvador is the capital of Bahia, one of the north-east states of Brazil, which is the country's poorest region. Like other Brazilian urban centres, it is characterized by deep social inequalities. According to a recent national census (IBGE, 2008), 10.4 percent of the Brazilian population does not have any regular income and, while 58.3 percent of the population earn up to but less than twice the minimum salary, 3.1 percent earn ten or more times the minimum salary.<sup>1</sup> The distribution of wealth in Brazil is such that the richest 10 percent have 45 percent of the national income, against 0.9 percent for the poorest 10 percent (UNDP, 2005). These disparities are reflected, and to some extent reproduced, in the disparities that characterize health services in Salvador. The Brazilian public health service (known as the SUS), which was formally established in 1988, is under-resourced and still faces major challenges, leading those who can afford it – roughly 25 percent of the population – to take out private health insurance.

While some SUS services, such as national blood donation centres, are reputed for their excellence, public health institutions are often overcrowded and considered as stigmatizing spaces. This makes private health insurance a crucial class marker, as McCallum (2005: 222) has noted.<sup>2</sup>

I had not planned to work on blood donation when I set off to Salvador to carry out research on contraceptive practices and ideas of the body in a context where the proposal to hormonally suppress menstruation has received much attention. Over the course of the fieldwork, several informants suggested I go to the blood donation centre to find answers to my questions about menstruation, blood and *hormônio* ('hormone'). The idea that regular menstrual cycling is a new and potentially harmful phenomenon has received much attention globally since the 2003 FDA approval of Seasonale, a contraceptive pill repackaged to produce only four menstrual periods a year (Seasonale®. *Fewer Periods. More Possibilities*™) and the English publication of Bahian gynaecologist Elsimar Coutinho's controversial book: *Is Menstruation Obsolete?* (1999).<sup>3</sup> Menstrual suppression is founded on two interconnected claims. The first consists in differentiating the menstrual bleeding pattern experienced by oral contraceptive pill users from 'natural' menstruation and suggesting that the former, due to its artificial nature, is dispensable. The second claim denaturalizes regular menstruation, arguing that this is a 'new biological state' (ARHP/NPWH, 2004), as 'in the past' or in 'tribal' contexts women reached menarche later, had more children and breastfed them longer than 'modern' women do. Indirect evidence, we are told, suggests that this increases the likelihood of gynaecological cancers and menstrual symptoms, problems purportedly overcome by the uninterrupted use of hormonal contraceptives (on menstrual suppression, see Martin, 2001: xi–xx; Potter, 2001: 146–8; Sanabria, 2008; as well as Gladwell, 2000; Rako, 2003). While presented in the USA and Europe as a lifestyle option, menstrual suppression grew out of the search for long-acting hormonal contraceptive methods that would overcome patient 'misuse' in the developing world and provide efficient methods to deal with the demographic problem seen to characterize these regions.

Early on in fieldwork I met Socorro, a small, joyful black woman of 54 who works as a domestic employee and has sent three of her six children to university on her wages. As someone who works outside the *favela*, and has paid for and equipped her own house after three separations, she has a certain authority in her community. She speaks of life as a *luta* (struggle), which in her case began aged 11 when she left her rural community to go into employment as a live-in servant in the nearby town. For Socorro, who counts all 11 of her pregnancies as *filhos* (children), including her five *abortos* (abortions),<sup>4</sup> social ascent is both reflected in and produced by ascent to high-status medical services. Her first child, who

was delivered by her mother at home is the poorest, and the lack of medical attention received during pregnancy and birth are tacitly associated to this child's subsequent misfortune, failed marriages and ill-health. By contrast her youngest, who was delivered by caesarean section in a reputable maternity unit in the capital, is training to be a nurse and Socorro speaks knowledgeably about how the baby was breech, evoking the hospital documents which she carefully keeps, as if her daughter's success was linked to these and to the technically assisted way in which she came into the world. During one of our many conversations, Socorro articulated an idea that had come up during my interviews on menstruation with other women, which eventually led me to the blood donation centre. In the same breath as she told me about the necessity for menstrual blood to 'come out', she explained that men, unlike women, needed to give blood and began telling me about the Hemocentre.<sup>5</sup> She offered to take me there, explaining that it was easily accessible thanks to a free bus service, where one was not only 'well attended' but could have all one's clinical exams done for free. In her words: 'Man, he gives blood, and this is good because this way he can renew his blood. It's just like with us women: menstruation is good, because the blood comes out and this way it re-forms itself.'

Such understandings undoubtedly contribute to the gendered disparity in blood donation practices in Brazil where, in 2004, only 35 percent of blood donors were women and 65 percent men (ANVISA et al., 2004).<sup>6</sup> As a means of overcoming this gender gap in blood donation, the Hemocentre in Salvador organizes activities aimed at recruiting women. 'Changing hairstyles can now also save lives', reads the headline of one of Salvador's newspapers on 8 March 2006, International Women's Day. Hair braiding, along with aerobics classes, were made available to women in the centre's waiting area throughout the month as part of a campaign entitled 'Campaign for Lipstick-using Donors'.<sup>7</sup> The campaign was presented as a means of encouraging women to donate blood, by 'thanking' them for their participation (Lyrio, 2006). 'The main reason for the low rate of women donating blood is misinformation', the article continues. 'Many women think they are inapt for donation during their menstrual period, but this is untrue.' Citing one of the Hemocentre's coordinators, the article continues: 'This is a taboo we need to knock-down. Combating this cultural barrier is one of the priorities of this campaign.' In the Hemocentre's own press release the idea of 'breaking myths and preconceptions regarding women and blood donation' (Hemoba, 2006) is reiterated. 'Giving blood does not cause weight-gain; the blood does not become thick, or thin and women do not lose weight because they give blood. And you can even give when you are menstruating, provided you are in good health', the official press release reads.

I eventually contacted the blood donation centre, explaining my research – framed as an interest in menstruation and local ideas about blood – and, after submitting a formal proposal, was given the all-clear. I began work alongside Lúcia, one of the social workers, who had trained in public health and had recently carried out a project on attitudes to blood donation with the donors, that she called the ‘Solidarity Line’. A clothes-line had been run throughout the reception and waiting areas and paper, pens and pegs provided for people to share their feelings and thoughts about blood donation. The pages of A4 paper on which people had left written messages in large handwriting, adorned with drawings of droplets of blood or heart-shaped blood bags reveal a great deal about some of the common ideas underlying blood donation in Salvador:

Giving is a gesture of renovation, of living, of being in harmony with life. *Álvaro*

Giving blood is the best thing in the world, I feel renewed. Kisses to you all. *Rosilda*

If giving is living, I live to be a donor of life! Give life, give Blood. *Marcio*

It's not enough to be alive, it's necessary to be human. Give yourself! Give blood! *Andréa*

Giving is promoting the extension of our lives in the other. Come give blood too :-). *Lívia*

If Jesus spilled all his BLOOD for the good of humanity, why can't we do our part? Only 500 ml can save several lives. *José Milton*

Make someone happy and be in peace. GIVE BLOOD, it's good for your soul and your body. *Clésia*

(Blood donation messages exhibited on the public ‘Solidarity Line’, Salvador, March 2006)

Within the divided social landscape of Salvador, the metaphors through which people understand and narrate their bodies’ capacities and workings vary substantially. These social differences are (re)made through medical understanding and compliance to medical regimes. Middle-class patients tend to hold more closely to authoritative images, and reveal a concern with accurate medical knowledge which is explained by the way in which *ignorancia* (ignorance) or *crendices* (beliefs) – as medical professionals refer to them – themselves become class attributes. *Soteropolitano*<sup>8</sup> middle and upper classes often represent low-income periphery dwellers as living in promiscuity and attribute to them a mixture of ignorance, hyper-sensuality and indolence. This representation of low-income segments of the population as ignorant arises in part from their (imagined or actual) recent rural origin. The *interior* (rural zones) is an important category of alterity in Brazil and carries associations of being *atrasado* (behind), or having backward traditional beliefs and customs. Campaigns such as those led by the Hemocentre share a concern with modernization with the hygienist campaigns

of the early 20th century, a national movement that sought to produce healthy bodies through physical and moral education aimed at producing 'cultured' individuals from the *inculto* (ignorant) masses. Today, ignorance about medical regimes continues to index social marginality and poverty, and being *esclarecido* (knowledgeable) about the body is key to being recognized as a 'modern', urban subject.

In Brazil, 38 percent of donors give blood for someone they know, a mode known as replacement donation. In an editorial celebrating 25 years of non-remunerated donation in Brazil, Guerra (2005: 1) notes that the international experience reveals this mode as a necessary intermediate stage in the move towards attaining a fully voluntary and altruistic system of donation. In what follows, I give a brief outline of the campaigns that the Hemocentre in Salvador runs to recruit donors, demystify blood donation and promote citizenship in the practice of blood donation. I then turn to a tension in collection practices in Brazil, centring on the popular idea that blood donation 'renews' the blood, is 'good for the body', or is a means of '*limpar* (cleansing) the blood'. For the staff at the Hemocentre who strive to construct blood donation as a voluntary and disinterested act – corresponding to Type H in Titmuss' (1997) typology – these 'beliefs' about blood are seen to impede the formation of informed citizens and to reveal selfish or individualistic motives for blood donation that undermine spontaneous voluntary donation.

### Bleeding as *Alívio* (Relief)

Explaining Socorro's views on blood donation and menstruation to one of the Hemocentre's nurses, I asked her if she had come across such analogies between blood donation and menstruation, and how she understood the notion of 'renewing' the blood that many donors talk about.

They say all sorts of things like: 'I came to give [blood] because my veins are high, they are altered, and I came to alleviate myself.' Or, 'My doctor says my blood is thick and I need to give blood.' They think that when they donate, the blood is renewed. They also say that women already renew their blood naturally. They come here and they say: 'If I leave it too long between donations, my whole body itches.' Can it be that they really feel these things? They come alone, on their own accord [i.e. not to donate for kin] and say that their blood is accumulated and can we take some out. (Cátia, 22 March 2006)

Most anthropological work on menstruation has focused on menstrual taboos or pollution. Buckley and Gottlieb (1988) attempt a reversal of the pollution as oppression model, suggesting that menstrual seclusion and taboos be seen as 'boons' to women. Leaving aside the problematic resistance/domination paradigm

rehearsed in this text, it is interesting to note that the authors hypothesize that stronger menstrual taboos arise where the flow of menstrual blood 'beyond the boundaries of women's bodies marks a missed opportunity for procreation' (1988: 39). The material presented in this article leads me to question the distinction Buckley and Gottlieb draw between blood and menstrual blood, and to focus on issues of blood retention beyond the strict focus on taboo and reproduction to which analysts of menstruation generally adhere.

'Global' menstrual suppression advocacy (as relayed in pharmaceutical 'education', international media or medical journals) addresses the 'myth' that menstrual blood will accumulate if a woman does not bleed regularly. Among the women I interviewed in Salvador, menstruation is often characterized as annoying or disgusting, but it is also widely seen as a purifying process, and as offering relief. One architect, who used sub-dermal hormonal implants somewhat self-consciously, relayed the sensation of swelling she had felt prior to their removal:

When I used the implant, my menstruation stopped coming down and I felt myself *inchar* (swell). And that made me imagine that it was as if, because she [my menstruation] no longer flowed, she remained accumulated there in the middle of my body [points to waistline]. I decided to remove it. I know it's probably just in my head, but I felt all *entupida* (obstructed). (Alicia, 4 October 2005)

This introduces a central tension in local attitudes to withholding blood as arresting the flow of menstrual blood is held to lead to a pathological accumulation of blood in the body. However, menstrual suppression also appeals to Brazilian ideas of modernity and cleanliness, and those who practise it view themselves as repudiating popular 'beliefs' about blood retention. Although notions of blood accumulation are generally framed by health practitioners as low-income patients' 'ignorance', Alicia's concerns and self-consciousness reveal that these ideas cannot be straightforwardly mapped onto class differences, as is often implied.

On one occasion, Lúcia (one of the Hemocentre's social workers), Fatima (a nurse) and I sat talking at one of the tables in the small snack bar adjacent to the donation room, where donors receive a snack after their blood has been collected. Lúcia felt this would be the best place for me to collect testimonies, as patients are usually anxious prior to donating and are more relaxed once they have finished. Fatima recounted that a woman had recently come to the centre very preoccupied about her husband, a regular blood donor, who had been incarcerated. He was *passando mal* (feeling unwell) in prison, his skin was itching and he wanted to give his blood, the woman had said. Commenting on the case, she noted that the couple attributed his ill-health to the fact he could no longer give blood, and stated that she had told the woman that her husband's symptoms

indicated he was in bad health and that his blood could therefore not be 'good blood'. Cátia, another nurse entered, and Lúcia and Fatima introduced me, explaining that I was researching menstruation and was interested in 'people's blood beliefs'. Cátia nodded knowingly and related the story of a woman who had come to the centre stating that she had had her uterus removed and wanted to give blood every month now. She told us that the woman had argued with the staff when they told her that donors must respect a three-month interval between donations. The woman had advanced that as she was no longer menstruating, due to the hysterectomy, there was no reason to respect the three-month interval, adding that since the hysterectomy she felt 'full of blood'. Meanwhile, a patient had come out of the adjacent donation room and was sitting at the neighbouring table in the snack bar, listening to the conversation. I turned to her and asked her if her donation had gone well and if she would be interested in telling me about how she came to be a blood donor.

*Patient:* I started giving when my niece had heart problems. One *cidadão* (citizen) responded to the announcement we made on television. He wanted R\$200 for every bag of blood he gave.<sup>9</sup> I was so shocked. My niece died. I became a regular donor, I was revolted. I wanted to show him that I have a better heart. My mother jokes that I'm almost a *socia* (partner) of the Hemo-centre. But I don't work, so I have time to come.

*Fatima:* Some say giving blood *engorda* (causes weight-gain).

*Patient:* *Engorda?* Nonsense! I have less pain in my legs now that I give blood. My blood coagulates easily. My doctor told me to give blood, he said it was good for me: it renews the blood. I feel good because I am doing good. It's gratifying to know that you are helping someone. [...] I never give when I am menstruating, because I'm already losing blood. [...] I feel unwell for a week before I menstruate, I have a headache, I become *nervosa*, stressed out. If I could take the pill continuously I would, one box after another, but I have circulatory problems and ameliorating one thing I would be harming another.

[I ask if her circulatory problems don't impede donation.]

*Patient:* No, it's just a problem of pressure, so the circulation actually improves, *né* (innit) because you're renewing the blood, so it flows more. I have to renew it because my blood is *grosso* (thick), and I need to *afinar* (thin) it.

Marilene, a nursing auxiliary who works in the centre and is a regular donor, relayed an idea I came across many times concerning the relation between blood accumulating and the idea that blood donation *vicia* (causes addiction).

I feel pins and needles, my legs ache, my body itches; I start to feel giddy when I go over my term between donations. This discomfort started when I began to donate blood. If I go over the four-month term between donations. Now I had to wait six months because of the medication I am taking. I want to stop the medication and go back to donating because I'm all swollen. (Marilene, 28 March 2006)



Explaining my research to her, I relate that many of the women interviewed as part of my research on menstrual suppression generally enjoy the freedom of not menstruating but often express concerns about the blood accumulating.

I agree, you know. That blood has to be expelled. I see a necessity for that. I know a person who put on a lot of weight, whose abdomen was distorted because of this. And really, in her case, it's visible, she uses that injection to stop menstruating [Depo-Provera]. I hate menstruating but I don't do that. If I had a problem, a uterine myoma<sup>10</sup> or that kind of thing, I would remove my uterus. But to arrest all that blood there [in the uterus], never. Not to mention the bad smell. Because blood reeks. Here [Hemocentre] you have to wash like crazy because otherwise it starts to stink. I have a friend whose blood is O+ so she has a necessity to give. But she contracted hepatitis donating, she says, although the virus did not manifest itself. She is menopausal, but because she cannot donate, she removes the blood herself, in her house, with a syringe.

A patient comes out of the donation room and sits at the table to take her *lanche* (snack). She hears the conversation and joins in:

I take Depo-Provera injections because I hate menstruating. I'm in favour of menstrual suppression. Giving blood brings relief, I feel alleviated to be able to help another person, it gives me sadness when I see on TV that there is a lack in the bloodstocks. [. . .]

The injection is good. Many women still have a taboo with the injection, they still have not 'conscientized' about the value of menstrual suppression. Even with Professor Coutinho working for years to show it's safe, they say it is harmful to their nature. [. . .] Many people don't like Depo-Provera but they don't know what they are missing. I used to use Microvlar, but it made me nauseous, to take pills every day. Depo-Provera was my salvation. When I stop taking it, I will *estrangular* [lit. 'strangle,' popular term for tubal ligation]. [. . .]

[To me] Do you know if instead of 'strangling', there is a doctor who could just take my uterus out and be done with it? Because I always say: 'the uterus only serves for three things: menstruating, having children and getting disease'. My mother had a hidden myoma, you know. It seems that after you menstruate [menopause], when it stops, then the *hormônio* (hormone) accumulates. I think when you strangle, then menstruation accumulates – I don't really know why – and then it [the uterus] augments. *Hormônio* gives myomas, right? So why not just remove the uterus straightaway? (Joseneide, 22 March 2006)

We discuss the difficulties arising from the constrained conditions of public health dispensing in Salvador, and I suggest that tubal ligations and myomas may not be causally linked, but Joseneide is unconvinced.<sup>11</sup> Returning to the question of menstrual suppression, she comments half serious, half in jest: 'Well, at least when you donate blood, this blood [unlike menstrual blood] is useful to someone and not just wasted!' This case reveals the close association of ideas of swelling and pathological accumulation (in the form of uterine myomas) associated with the retention of both blood and *hormônio*. This blood donation patient resolves the problem of menstrual suppression in an extraordinary way, dispelling both the inconveniences of menstrual bleeding and its swelling effects by turning to a

further medical intervention: blood donation. However, this action – and accompanying notion of giving the otherwise useless menstrual blood a positive and altruistic function – has not resolved the problem of *hormônio* accumulation, to which she attributes the appearance of uterine myomas. In taking up this strategy she effectively separates out *hormônio* from blood and reproduces the problem in a different form.

Bahian notions of *sangue* (blood) are central to understanding the ways in which bodies are seen to be internally constituted and influenced by exogenous sources of different kinds. In many of my informants' perspectives, *sangue* does not obey the same rules as the capillary blood described by Western anatomy. Instead, it circulates in various states (thick/thin, pure/impure, hot/cold) and is the support on which a range of exogenous influences imprint themselves in bodies. *Sangue* is also a trope through which people convey ideas of lassitude, bodily capacities, well-being, rage, etc. Within such a context, the chemical messengers of the blood are also transformed. This blood has other capacities and meanings attached to it. The meanings that *hormônio* has acquired in Salvador reveal the way in which the biomedical concept of sex hormones has itself been absorbed into local ideas of blood. *Hormônio* exceeds the standard meanings of the English term 'hormone', occupying a semantic gap opened by humoral ideas about bodily capacities, that in Brazil are narrated as deriving from 17th-century versions of Hippocratic medicine, brought to Brazil by European physicians. This humoral understanding of bodies is based on ideas about the flow and transmutability of substance, and is one in which a body's plasticity and susceptibility to internal or extraneous transformations is assumed. The common usage, in Bahia, of the singular form *hormônio* gives it a fluid, homogeneous quality that is absent in the plural form 'hormones'. In this rendering, *hormônio* retains fluid-like properties rather than coming to be understood – as might be expected in such a medicalized context – as a class of entities with causal properties as implied by the notion of chemical messengers. The anthropological literature on substance is vast and has a complex historiography (Carsten, 2004: 109–35) that I will not rehearse here. *Hormônio* and *sangue* reveal an idea of bodies as relatively undifferentiated enclosures, which can be filled or purged of their excesses. These interventions, in turn, have effects on the ontological status of bodies, both transforming what, in other contexts, is seen as immutable biology, and thereby disturbing 'the' body as sign of such facts of nature.

### Good Blood: Donation as Moral Alleviation

Many donors proudly refer to the fact that they have a card, that is, that they are regular donors. Having a blood donor card is often taken as meaning 'having

good blood', which in turn implies being in good health, or 'being clean.' After a few visits, the staff called my attention to a problem they perceive in donors' intentions for donating blood, centring on the notion of *alívio* (relief) which donors commonly express. As one nurse explained:

If they donate [blood], it means that they are healthy. In truth, many come here to donate with the expectation of finding out if they are healthy. To donate you have to be healthy, and knowing that is an *alívio* [relief]. So they say it makes you lose weight. Who knows how they think! They say they are preoccupied when they don't donate, they say it starts to itch – their whole skin – and they come to donate. Maybe they say donating makes you lose weight because this way you remove a weight, a worry, and it's a relief. (Conceção 8 March 2006)

Simone, like other members of staff in the Hemocentre, is concerned about the fact that people come to the centre with the expectation of carrying out blood tests for free:

Blood donors love getting the results of their exams, and they call up here angry when they don't receive them, even when it's their own fault for giving the wrong address. The person who is *fidelizado* [regular donor] cares for himself, uses condoms, has a fixed girlfriend, looks after himself, because he wants his donation to be used. We who fight for voluntary donation are sad to see that they come here only to have their clinical exams done for free. (Simone, 8 March 2006)

Although the rate of HIV-testing in Brazil has risen (from 20 percent in 1998 to 33 percent in 2005), the main category of persons being tested are women aged 25–39, due to the inclusion of HIV-tests in pre-natal care (Paiva et al., 2006: 113–14). There are 322 public testing units in the whole of Brazil and the decentralization of diagnostic practices to the network of 'Basic Health Units' (roughly equivalent to local NHS surgeries) was encouraged through the national campaign *Fique Sabendo* (Find Out) launched in 2003. The literalized understanding of blood testing as taking away a weight was strongly reinforced by the campaign, which figured individuals carrying grand pianos on their backs to symbolize the weight of not knowing. Given that the expansion of HIV-testing services away from specialized AIDS centres has been slow, and given the strong stigma associated with seeking the services of these centres, the awareness of the importance of carrying out diagnostic tests has developed somewhat faster than non-stigmatizing contexts within which to carry out tests free of charge. In 2005, a Bahian paper ran a story on this issue with the headline: 'Hemocentre is Not the Correct Place to Obtain an HIV-test'. The article applauds the initiative of seeking a blood test after 'risk behaviour', but notes that the blood donation centre is not the correct locale to do this: 'if you know there is a risk, you must not give blood', the article warns. As part of the attempt to overcome the technical problem posed by the 'immunological window'<sup>12</sup> a self-exclusion questionnaire and 'vote' was set up prior to the collection of blood. This triage process involves a private

interview concerning general health and, in the interviews I was present at, thoroughgoing questions relating to sexual practice and number of sexual partners. At the end of the interview, patients are asked to 'vote' by pressing the Y or the N key on the keyboard presented to them, in response to the question: 'Do you guarantee that everything you have said is true, and do you think your blood is safe?' or 'If for some personal reason you have omitted something, that is your right, but please press N', as another doctor put it. This self-exclusion 'vote' is designed to catch out people 'in the immunological window': people who might have been involved in a risk-behaviour within the last three months and whose blood results would be negative although the risk of infection may be present.

During one afternoon session in the social service office, a woman in matching pink heels and lipstick stormed in, very flustered, demanding an explanation as to why her blood had been 'blocked'. Lúcia, the social worker, calmly deflected her anger, asking her for her documentation. The woman – who kept repeating she had a donor card – declared that she had not received her results by post and had just been informed at the reception that her donation had been refused: 'How embarrassing! The receptionist told me my blood was blocked. I can't believe it! I want to know why! This has made me very *nervosa!*' Lúcia calmly reassured her, as she looked for the woman's file. Reviewing this, she affirmed that it was 'nothing serious', and that the woman had probably eaten 'heavy food' which led to the blood being refused. Tapping her on the shoulder, she said: 'It's nothing *querida* [darling], go in peace, and good luck with your next donation.' When she left, Lúcia turned to me, one eyebrow raised and said: 'She's worried about her husband going with women in the street.'<sup>13</sup> Many of the regular female donors are what she referred to as 'responsible married women', and blood donation becomes a means of establishing if their husbands are having extra-marital affairs, in a context where male infidelity is both common and seen as something women should tolerate. Bahian gender relations are founded on what Parker (1991) has described as the simultaneous cult of virility and cult of virginity, and while men enjoy sexual freedom in this patriarchal context, a sharp distinction is drawn between 'respectable' and 'sexual' women. Donating blood, for married women, is thus adopted as a means of establishing they are free of infection, while complying with one of the strongest demands made upon women: that of being altruistic and giving. During the self-exclusion questionnaire, Carla – one of the centre's doctors – noted, women at times respond to the question 'Have you had a sexually transmitted disease in the last 12 months?' that *they* have not, but that they do not know about their husband. Men, she added, often openly explain that they have two or sometimes three fixed sexual partners:

They say they have unprotected sex with all these people, but then they feel extremely stigmatized and judged when we don't let them donate. They think that their neighbour is OK because they know her, they think she is clean and they come here saying: 'Are you crazy *Doutora* [Doctor], with women in the street I always use condoms! With my wife no, but with a woman I don't know, always.' (Carla, 28 March 2006)

Blood donation is often adopted as a means of establishing the state of *limpeza* (cleanliness) of the blood. The army and Evangelical churches provide the largest number of donors in Salvador. These churches mobilize donors through the powerful Christian idioms of blood and self-sacrifice (e.g. José Milton's comment from the 'Solidarity Line'). *Crentes* (believers)<sup>14</sup> often come to the centre, at times in groups of several hundred. 'They have national campaigns in favour of donation', Conceção, a nurse, explained. 'But,' she notes, 'there is a high rate of un-usability of their blood.' About 30 or 35 bags are discarded for every 100 collected, she estimates. These churches attract 'marginals', she states, 'ex-drug users and people who are in recovery' (Conceção, 27 February 2006). The gifts of blood that Pentecostal churches are able to mobilize *en masse* are interpreted by some of the Hemocentre staff as interested gifts. Despite the centre's reliance on these regular donations, some members of staff opined that *crentes* had 'bad blood'. There is ambivalence concerning these donations, which do not fit the ideal of blood donation as a disinterested act of citizenry, but instead are seen to be carried out in view of purifying the donor – both spiritually and physically.

*Limpeza* (cleanliness), purity and hygiene are distinctive concerns in urban Bahia which cut across and combine elements from different registers. The term *limpeza* brings up an interesting problem for the anthropologist as the common Brazilian-Portuguese usage collapses the two English concepts of 'clean' ([to] free from dirt and impurity) and 'cleans'. The *OED* tells us that the more specialized English term 'clean' came to replace 'cleans', freeing up in the term 'clean' the direct association to purifying from dirt or filth. What has been removed semantically by this branching out of terms is, in English, the association with moral or spiritual cleansing, such as the idea of purification from sin or guilt. This linguistic purification has not occurred in Brazilian-Portuguese, affording an extremely rich and textured set of meanings to the actions and intentions that surround acts of *limpeza*. In this context, dirt and filth carry stronger moral evaluations. In Bahia, *limpezas* are commonly carried out by Christian, Spiritist and Afro-Brazilian religious practitioners, and are understood as acting on both the physical (cleaning) and the spiritual (cleansing) levels. Bahian ideas about cleansing mingle notions of dirt, the rapid ageing of materials due to the humid tropical climate, and energetic notions of dirt arising from blocked energy, or negative feelings such as jealousy or *mal olhar* (evil eye). Together, these produce a particularly powerful sense of dirt.

## Blood and the Politics of Ignorance

In Afro-Brazilian traditions, *axé*, the life force, circulates through material substances such as *sangue* (blood). *Axé* can be absorbed, wasted or accumulated, and all personal accomplishments are dependent on the proper management of *axé*. Generally speaking, in Bahia – that is, beyond strictly Afro-Brazilian contexts – blood is closely associated to strength. This equation between strength and blood is widespread cross-culturally, and reported, for example, by Fairhead *et al.* who reveal the way people in The Gambia assimilate illness to a ‘struggle for blood’ (2006: 1112). In The Gambia, they argue, blood loss is seen as leading to a depletion of strength, which gives rise to concerns over blood-theft in medical trials. By contrast, in Bahia, the removal of blood – such as through blood donation – is an important aspect of good health, and is seen as an efficient means of managing and intervening upon the quality of blood. As the blood donors’ comments presented here reveal, too much *sangue* can cause itching, dizziness or a sense of *mal estar* (sickness). Here, health is closely associated to the state of the blood, which can be affected by a range of factors which, along with infections, include types of foods ingested, being *encostado* (lit. leaned against, by a spirit) or strong emotions. Estácio, a 28-year-old man I met in the Hemocentre snack bar, elaborated on this relation between *sangue* and food on the one hand, and *sangue* and emotions, on the other.

Donating blood is good to renew the body’s cells and to save lives. [. . .] I feel relief when I give. My *sangue* is very thick. It blocks my veins, it gives me pins and needles in my legs, and sometimes my arm swells. [. . .] My mother has arthritis in her *sangue*, it must be the reason. Because arthritis is a blood disease, isn’t it? [. . .]

My mother makes *feijão com sarapatel* [beans with tripe and blood], *feijão-andu* [beans] and those kinds of strong food from the *interior* [rural zones]. But I was over-weight and I had to change my diet. Now I only eat pasta, rice and chicken. I don’t eat strong foods any more. The thing is that I love Bahian food, *caruru*, *acarajé*, but the doctor said I had to stop. I used to snack in the street lots. But my blood pressure is high and it’s linked to the *gordura* [fat]. I sometimes feel *tontura* [giddiness]. When I sneeze I see like glow-worms and I get a headache. My *sangue* boils, it heats up when I get *nervoso*. [. . .] When I feel rage, heat rises through my body. I get angry when I’m playing football, during *carnaval*, at work. I inspect street-vendors, the council only kept me two months because I fought. I think I’m calm, but when you mess with me I get rage and my *sangue* boils.

Lack of bodily hygiene, sudden changes in temperature or failure to follow moral prescriptions are also seen to have repercussions on *sangue*, causing it to boil, to rise rapidly, to thicken or to accumulate, or otherwise affecting its proper flow. Likewise, exogenous influences, such as climatic forces or the intentions and feelings of others such as *mal olhar* (evil eye) and *olho grosso* (jealousy) may affect *sangue*, causing physical disturbances in the person upon whom they fall.

In this sense, although *sangue* is closely associated to strength, it must circulate in a state of balance to confer strength. Its excessive accumulation or an unbalance of *sangue* is debilitating and considered pathological.

In *Soteropolitano* medical institutions, I found that the question of the ‘origin’ of popular ideas about blood and the body was fairly politicized. ‘Beliefs’ about blood were commonly attributed to the large Afro-descendant population, or more generally to the ‘culture’ of the urban poor. Many doctors I met felt disheartened by the degree of *ignorancia* (ignorance) they perceive among the patients of public health dispensaries. Despite their continued efforts to provide patients with information, ‘cultural beliefs’ are seen to impede the appropriate use of medication, contraceptive devices or practices such as blood transfusion.

Given this local ‘politics of ignorance’ – where blood beliefs are attributed to backward, rural, traditional understandings or to Afro-Brazilian cultural remnants – it is interesting to note the parallels that some authors make between the ideas about blood such as those presented here, and classical European humoral medical ideas (e.g. Andrade, 1996; Foster, 1994). Speaking of the presence of humoral ideas in Brazil, Andrade (1996) argues that humoral ideas introduced during Portuguese colonization and refreshed over the centuries of intellectual exchange and circulation between Brazil and Europe continued to structure ideas and model therapeutic practice well into the 20th century. She suggests that ‘residues’ of humoral thinking persist today among the ‘popular urban classes’ who:

... present themselves daily to blood banks in public hospitals, with no medical indication, claiming to need an urgent removal of blood, considered by them excessive, ‘thick’, in a clear attempt to re-establish what they consider as a balance of this humour, supposedly disturbed by its excess or viscosity. (Andrade, 1996: 52, my translation)

The practice of therapeutic bloodletting – also known as venesection or phlebotomy – has a complex history.<sup>15</sup> Although it was used consistently from Antiquity to the 19th century, the rationales underlying its use evolved. The development of laboratory science, infectiology and pathology gradually led to the demise of the practice as a treatment for plethora (excess of blood) in the mid-1800s.<sup>16</sup> However, Risse (1979) notes that bloodletting went through a renaissance at the end of the 19th century when this therapeutic tool survived the demise of humoralism and was defended on the basis of its empirical efficacy in the treatment of specific illnesses, such as pneumonia. In this period, the practice ceased to be viewed as a panacea as its efficacy was more narrowly redefined (Risse, 1979: 21), although the practice continued into the 1930s and 1940s. As Risse notes, old practices die hard, and treatises on the practice of venesection as a preventive measure against ageing continued to be found well into the 1950s in Western Europe.

[B]loodletting in the twentieth century reveals the stability and essential conservatism of therapeutic medical practices regardless of their intellectual underpinnings. Much of that continuity was not predicated on pharmacological efficacy but depended instead on the value and expectations attached to time-worn procedures by healer and patient alike. Moreover, physicians also continued to lance patients because the patients reported favorable subjective effects from bleeding and frequently displayed substantial objective improvements after the blood had been removed. (Risse, 1979: 22)

Sullivan (1981), cited in DePalma et al. (2007: 139–40) has suggested that the greater incidence of heart disease in men and in postmenopausal women is linked to a higher levels of stored iron found in these groups, as iron intake exceeds losses. Further, the apparent decrease in coronary disease in regular blood donors seems to lend support to the hypothesis that lowered iron store has a favourable effect in reducing cardiovascular disease. In their review of bloodletting ‘past and present’, DePalma et al. note:

Other beneficial physiologic effects of blood donation have been noted to potentially relate to a decreased incidence of coronary disease. High-frequency blood donors have lower ferritin values [...] than low-frequency donors, significantly elevated flow-mediated dilatation in their brachial arteries, and reduced levels of 3-nitrosamine, a marker of oxidative stress. [...] These observations reinforce physiologic links between blood donation and potentially reduced cardiovascular risk. (2007: 140)

Although this hypothesis is far from hegemonic, this recent medical review of the therapeutic value of bloodletting suggests that questions regarding the benefits and sense of well-being derived from bloodletting – and blood donation – remain open.

Remedying the problems of thick blood through blood donation raises complex questions concerning the coexistence of different understandings of the body in Salvador and the ways in which these are seen to reflect class – or cultural – differences. The practices related here invite us to question how knowledge about health and the body changes or is accommodated by newer ideas, techniques and practices. Such questions have a long history in anthropological analyses of European medical ideas in Latin America, as attested to by the debate between Foster (1994) and López-Austin (1988) on the origin of hot–cold beliefs in Latin America. Foster argued that the contemporary humoral medicine described by anthropologists working in indigenous and *mestiço* communities in the Americas is ‘a simplified form of classical humoral theory and practice, which was brought to the New World by Spaniards and Portuguese’ (1994: 149). The ‘filtering down’ of this Hippocratic model from elite urban contexts to the popular level through medical personnel, pharmacies and home care manuals is, Foster suggests, the only way to account for the homogeneity of humoral understandings throughout Latin America and the Caribbean. Although the recognition that humoral



models of health may have a European, rather than an indigenous or African origin is – I believe – important for the politics of ignorance in contemporary medical encounters, some scholars have taken issue with the fact that Foster describes contemporary Latin American humoral medicine as a ‘*simplified*’ form of classical humoral theory. López-Austin (1988), for instance, argued that these widespread understandings are founded on an indigenous Mesoamerican dual cosmology, rather than on a degenerate Hippocratic system.<sup>17</sup>

The Hemocentre staff tend to view blood-lore and ‘beliefs’ as caused by lack of education among the general population. In this sense, the centre’s campaigns are aimed at educating the population in order to overcome cultural myths. ‘They have these beliefs because of lack of education, because they are *sem cultura* (uncultivated)’, one of the members of the Hemocentre’s communications office commented. Conceção, one of the nurses, explains that she tells patients: ‘There is no health benefit whatsoever for the donor, the only health benefit is for the recipient. For the donor, it’s only the joy of having helped someone.’ This reveals a tension between the constitution of blood donation as altruistic and disinterested giving and the need to keep donors returning. In a context where citizenship is seen to be very much in the making, this tension between the ideal of anonymous, uncompensated giving and donation as generating some kind of benefit for the donor must be constantly renegotiated.

Despite the apparent peculiarity of the views on blood and blood donation presented here, my aim is not to attribute these either to an archaic remnant of ancient humoral ideas, nor to suggest that they represent some exotic and idiosyncratic understanding of the body. On the contrary, these views attest to the creative and dynamic process through which medical ideas recombine and are given new meaning in contemporary Bahian medical encounters. In this sense, knowing and not-knowing are specific to particular regimes of knowledge. Ignorance is seen to derive not only from the absence of knowledge, but from the presence of the wrong kind of knowledge. The assumption, at times shared in anthropological work on medical pluralism in Brazil, is that the coexistence of different ideas about the body produces contradiction, incoherence or is a sign of incomplete modernity. Yet, as Mol (2002) reveals, when we look more closely at the notions of body operative in biomedicine, it transpires that ‘the’ biomedical body itself is marked by plurality. My suggestion has been that, in contemporary Bahia, a range of different regimes of truth about the body circulate and coexist. The notion that this may be contradictory is, following Mol, itself founded on an idea of a unitary world fragmented into different relative perspectives, such as the idea that there is a ‘real’ body and different modes of representing ‘it’.

Debates concerning the origin of views about blood run the risk of overlooking the ways in which these accommodate new concepts (such as that of *hormônio*) or become partially re-embedded in practices such as blood donation. Further, both medical debates surrounding hormonal menstrual suppression and the role of women as blood donors reveal that humoral thinking is anything but limited to Brazil. In the Bahian context, a key feature in the narratives of women of all classes who use hormones to suppress menstruation is the way in which these hinge on ideas of modernity. This transpires in the way the necessity 'others' feel to purge the body is represented as ignorance or in the emphasis that being subjected to 'incessant' menstrual cycle changes is impractical given the requirements of modern life. In their historical and cross-cultural study of menstrual regulation, van de Walle and Renne (2001) show that, throughout Western history, regular menstruation was characterized as essential to good health and menstrual retention was seen to lead to plethora: a build-up of blood in the body. This explains why one of the key messages relayed in the presentation of hormonal menstrual suppression to women world-wide is that suppressing menstrual bleeding through the continuous use of hormonal contraceptives does not cause menstrual blood to accumulate. Referring to the Hippocratic treatise on plethora (van de Walle and Renne, 2001: xxii), they note that blood-letting was adopted as a treatment for women who had ceased to menstruate and, 'as a result, had too much blood'. From this perspective, Joseneide's adoption of blood donation as a solution to the perceived accumulation of blood caused by her use of the menstrual suppressive contraceptive injection comes to look less extraordinary. Significantly, the information provided in Salvador on women and blood donation is at times contradictory. While some information stresses that menstruation in no way impedes giving blood, others stress that women can give less often than men (every four months instead of every three for men) or that during menstruation and in the post-partum a woman cannot give blood. One nurse explained that she tells patients this is due to the loss of iron associated with menstruation, although today the recommendations state that it is fine to donate during menstruation.

There are people who still think that you can't donate blood during menstruation, and don't come. They still follow the old norms, although it's not like that any more, now the norm has changed and they can donate menstruating. But it's very difficult to change mentalities. (Claudia, 22 March 2006)

In an interview, the director of Salvador's Hemocentre asked me if I knew where all the myths people came to the centre with were from. I responded that, according to many people I had interacted with, both in the blood donation centre and in my work on popular 'beliefs' surrounding menstruation and blood,

these views tended to be ascribed to Afro-Brazilian ideas about the body. Interestingly, she gave a rather different response, suggesting instead that these ideas were reinforced by doctors and medical professionals themselves.

You get people who come in saying things like: 'My doctor saw my haemogram and said that I had to give blood because my haemoglobin is high.' Who knows if this is true, if there are really doctors out there telling their patients things like this? Things have to evolve, but science also has to respect these ideas, especially for those who already come with these ideas in their head. It's not going to be any use convincing my father, for example, but now, my son, and children, yes. So that they can become informed adults. [. . .] Here people have lots of fear about their blood. Even nursing auxiliaries sometimes speak of *sangue grosso* (thick blood). But if the tapping is not done well, the blood does not flow as easily. Or for example, the donor asks: 'Why is the homogenizer beeping?' And the nurse replies 'Because your blood is thick.' Do they really believe this, or is it to simplify the explanation? At some point it all gets mixed up. (Dr Balbina, 10 April 2006)

Although the question of how different ideas of blood coexist in Bahia would require far greater attention than can be given here, my goal in the present article has been to call attention to the fact that a proportion of the 'myths' that medical professionals work to dispel find their origin in medical practice itself. With regard to both blood donation and gynaecology, much of the rationale that patients come to medical institutions with is based on old medical protocols that had evolved in the rapidly shifting medical landscape, but remain in the public imaginary, as it were. As medical norms shift, what is taken as ignorance is often simply expertise in older ways of doing things.

## Notes

The material presented here is part of a larger research project funded by the Economic and Social Research Council for which fieldwork was carried out in Salvador in 2005–6. Special thanks are due to Josefa Pereira da Silva, Liege Maria da Silva Servo, and to the staff and patients of the blood donation centre. Additional thanks go to Ann Kelly and Jonathan Mair, as well as to Marie-Christine Pouchelle and the two anonymous *Body & Society* reviewers for their comments on an earlier version of this article. All names have been changed with the exception of Elsimar Coutinho.

1. The minimum salary in 2007 was in the range \$R380–415, equivalent to roughly £105–115 per month.

2. There is a strong racial dimension to the question of class in Brazil, as, according to national census data (IBGE, 2000 cited in UNDP, 2005), 70 percent of the poorest 10 percent are black. I do not discuss social inequalities in terms of race here, as race is rarely the explicit language people adopt to speak about social differences. However, this lack of recognition of the racial dimension of social inequality is precisely what many analysts of race in Brazil call attention to.

3. The title of the Oxford University Press English edition is more subdued than the Portuguese original, which would translate as 'Menstruation: Useless Bleeding'.

4. The term *aborto* refers to both induced abortion and miscarriage, an ambiguity reinforced by the illegality of induced abortion. *Aborto* is thus qualified as either 'provoked' or 'natural', and women often attribute *aborto* to a *susto* (shock) or fall, as Socorro formally did.

5. Hemocentre is the term adopted in Brazil to refer to state-funded blood banks and collection centres.

6. This situation is further exacerbated in the north-east of Brazil, where 29 percent of donors are women and 71 percent men.

7. '*De batom*' ('of lipstick') is a commonly used term to refer to women, in reference to the self-adopted term 'Lipstick Lobby' that the National Council of Women's Rights adopted in the mid-1980s as part of their campaign in the Brazilian Congress.

8. Inhabitants of the city of Salvador.

9. R\$200 amounts to roughly £60.

10. Also known as uterine 'fibroids' these are benign growths that appear on the uterine wall and, when large, can cause symptoms such as irregular or heavy menstrual bleeding.

11. However, the association drawn here between tubal ligations and abnormal uterine growth leading to hysterectomies is far from unfounded. For example, Araújo and Aquino (2003) found a positive correlation between tubal ligation before the age of 30 and increased epidemiological risk of elective hysterectomy among 1115 Brazilian women.

12. The fact that tests performed on donated blood do not guarantee that blood entering the bank is 100 percent free of infection given the three-month window of incubation for the HIV and hepatitis viruses before it is revealed through assays.

13. In this context, 'of the street' does not necessarily imply a prostitute, but refers to a woman of loose morals.

14. Generic term for members of Evangelical sects.

15. With regard to venesection in Brazil, Pimenta (2003) shows that 85 percent of requests for permits as bloodletters were made by slaves in Brazil in the first half of the 19th century. This adds a further layer of historical complexity to the popularly held conception that therapeutic bloodletting is an 'African' tradition. In the 1820s, bloodletting became subject to much more stringent legislation, following numerous complaints, and the title of bloodletter ceased to be conceded, although the practice persisted in medical institutions.

16. Kuriyama (1995) has argued that the notion of plethora (excess blood) was the cornerstone of Galenic medicine, which would render the ideas encountered in Brazilian traditional understandings of blood Galenic rather Hippocratic, as is commonly suggested in the literature.

17. This debate has essentially been addressed from the perspective of ethnomedical classification (e.g. Mathews, 1983) or cognitive anthropology (e.g. Messer, 1987) in the interaction between indigenous and European systems of thought. In Bahia, hot and cold ideas – such as those characteristic of the Meso-American world López-Austin refers to – are less common than ideas of plethora, and blood is the only humour to be regularly evoked.

## References

- Andrade, T. (1996) 'Humores e odores: ordem corporal e ordem social no Rio de Janeiro, século XIX', *História, Ciências, Saúde – Manguinhos* 2(3): 44–96.
- ANVISA, Ministério da Saúde and UERJ (2004) *Perfil do Doador de Sangue Brasileiro, Brasil Síntese*. Rio de Janeiro: Universidade do Estado do Rio de Janeiro, IME, PRESTAP.
- Araújo, T. and E. Aquino (2003) 'Fatores de risco para histerectomia em mulheres brasileiras', *Cadernos de Saúde Pública* 19(Suppl. 2): 407–17.
- ARHP/NPWH (2004) 'Extended and Continuous Use of Contraceptives to Reduce Menstruation', in *Clinical Proceedings* special joint issue from the *Association of Reproductive Health Professionals and National Association of Nurse Practitioners in Women's Health*, September: 2004: 1–29.
- Buckley, T. and A. Gottlieb (eds) (1988) *Blood Magic: The Anthropology of Menstruation*. Berkeley, CA: University of California Press.

- Carsten, J. (2004) *After Kinship*. Cambridge: Cambridge University Press.
- Coutinho, E. (1999) *Is Menstruation Obsolete? How Suppressing Menstruation Can Help Women Who Suffer from Anemia, Endometriosis, or PMS*. Oxford: Oxford University Press.
- DePalma, R.G., W.H. Virginia and L.R. Zacharski (2007) 'Bloodletting: Past and Present', *Journal of the American College of Surgeons* 205(1): 132–44.
- Fairhead, J., M. Leach and M. Small (2006) 'Where Techno-science Meets Poverty: Medical Research and the Economy of Blood in The Gambia, West Africa', *Social Science & Medicine* 63: 1109–20.
- Foster, G.M. (1994) *Hippocrates' Latin American Legacy: Humoral Medicine in the New World*. Langhorne, PA: Gordon and Breach.
- Gladwell, M. (2000) 'John Rock's Error: What the Co-inventor of the Pill Didn't Know: Menstruation can Endanger Women's Health', *New Yorker* 13 March: 52–63.
- Guerra, C. (2005) 'Editorial: Fim da doação remunerada de sangue no Brasil faz 25 anos', *Revista Brasileira Hematologia e Hemoterapia* 27(1): 1–4.
- Hemoba (2006) 'Hemoba quer quebrar mito de que mulher não pode doar sangue', Ascom/Sesab press release, Salvador (BA), Brazil, 13 March.
- IBGE (2008) *Pesquisa Nacional por Amostra de Domicílios (PNAD) Síntese de Indicadores 2007*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística.
- Kuriyama, S. (1995) 'Interpreting the History of Bloodletting', *Journal of the History of Medicine and Allied Sciences* 50(1): 11–46.
- López-Austin, A. (1988) *The Human Body and Cosmology: Concepts of the Ancient Nahuas*, trans. T. Ortiz de Montellano and B. Ortiz de Montellano. Salt Lake City, UT: University of Utah Press.
- Lyrío, A. (2006) 'Doadoras de sangue são minoria', *Correio da Bahia, Aqui Salvador* 8 March.
- McCallum, C. (2005) 'Explaining Caesarean Section in Salvador da Bahia, Brazil', *Sociology of Health & Illness* 27(2): 215–42.
- Martin, E. (2001) *The Woman in the Body: A Cultural Analysis of Reproduction*, 3rd edn, with a new Preface. Boston, MA: Beacon Press.
- Mathews, H.F. (1983) 'Context-specific Variation in Humoral Classification', *American Anthropologist* 85(4): 826–47.
- Messer, E. (1987) 'The Hot and Cold in Mesoamerican Indigenous and Hispanicized Thought', *Social Science & Medicine* 25(4): 339–46.
- Mol, A. (2002) *The Body Multiple: Ontology in Medical Practice*. Durham, NC: Duke University Press
- Paiva, V., L.R. Pupo and R. Barboza (2006) 'O direito à prevenção e os desafios da redução da vulnerabilidade ao HIV no Brasil', *Revista de Saúde Pública* 40(Suppl.): 109–19.
- Parker, R. (1991) *Bodies, Pleasures, and Passions: Sexual Culture in Contemporary Brazil*. Boston, MA: Beacon Press.
- Pimenta, T.S. (2003) 'Entre sangradores e doutores: práticas e formação médica na primeira metade do século XIX', *Cadernos Cedex* 23(59): 91–102.
- Potter, L. (2001) 'Menstrual Regulation and the Pill', in E. van de Walle and E. Renne (eds) *Regulating Menstruation: Beliefs, Practices, and Interpretations*. Chicago, IL: University of Chicago Press.
- Rako, S. (2003) *No More Periods? The Risks of Menstrual Suppression and Other Cutting-edge Issues About Hormones and Women's Health*. New York: Harmony Books.
- Risse, G.B. (1979) 'The Renaissance of Bloodletting: A Chapter in Modern Therapeutics', *Journal of the History of Medicine and Allied Sciences* 34(1): 3–22.
- Sanabria, E. (2008) 'Limits that Do Not Foreclose: Biomedical Intervention, Hygiene and Sex Hormones in Salvador, Brazil', PhD Dissertation, Department of Social Anthropology and King's College, University of Cambridge.
- Titmuss, R. (1997 [1970]) *The Gift Relationship: From Human Blood to Social Policy*, original edition with new chapters, edited by A. Oakley and J. Ashton. New York: The New Press/LSE Books
- UNDP (2005) *National Human Development Report: Brazil*. Brasília, DF: Programa das Nações Unidas para o Desenvolvimento, PNUD Brasil.

van de Walle, E. and E. Renne (eds) (2001) *Regulating Menstruation: Beliefs, Practices, and Interpretations*. Chicago, IL: University of Chicago Press.

**Emilia Sanabria** is a research fellow at the Centre Edgar Morin (EHESS/CNRS) and member of the *Laboratoire d'anthropologie sociale* (Collège de France) in Paris. She received her PhD in social anthropology from the University of Cambridge in 2008. Her doctoral dissertation was based on fieldwork conducted in Bahia (Brazil) on contemporary bodily practices and asks what makes the body, in Brazil, so readily open to intervention. [email: emilia.sanabria@ehess.fr]