“One of the good guys”: sperm donor masculinity and the falling Danish sperm count discourse

Alison Wheatley^{*a1}

Science, Technology & Innovation Studies, School of Social and Political Science, University of Edinburgh, Edinburgh, UK^a

*Corresponding Author: Alison Wheatley Email: alison.wheatley@ncl.ac.uk

¹ Current affiliation: Institute of Health and Society, Newcastle University, Newcastle-upon-Tyne, UK

Abstract

Sperm banks in Denmark produce and export donor semen worldwide. The role of the sperm bank is to provide high quality, safe semen from desirable donors. However, over the last twenty years, global sperm counts are reported to be falling. Along with these discourses comes the implication that poor fertility is a personal failing, which implies a conflation of 'fertility' with 'potency'. This article draws on qualitative research with Danish sperm donors to explore how donors construct their identities as donors and as the producers of 'good sperm'. Accounts of the drive to produce the best sperm possible and the resultant confidence boost are bound up in ideas about masculine potency and potential and bodily performance and set against a backdrop of a moral panic surrounding the apparently declining Danish sperm count.

Keywords: sperm donation; Denmark, falling sperm count; identities; masculinity

Introduction

At the heart of sperm donation is the substance of semen itself, yet it is often missing both from analysis and from view. Kroløkke (2009) argues that, on the website of a particular sperm bank,

.... nowhere does the company feature the biological matter that it sells. Semen is solely described in light of the technology (and the caring) involved. [...] The company's reworking of semen illustrates an interesting ambivalence in which semen is the matter for sale yet also largely invisible.

This issue is not new. Grosz (1994) argued that semen had not been examined phenomenologically to the same extent as the bodies and bodily fluids of women, which were positioned as uncontrollable and subject to heavy surveillance, in opposition to the neutral masculine. She posited that

.... seminal fluid is understood primarily as what it makes, what it achieves, a causal agent and thus a thing, a solid: its fluidity, its potential seepage, the element in it that is uncontrollable, its spread, its formlessness, is perpetually displaced in discourse onto its properties, its capacity to fertilize, to father, to produce an object (Grosz 1994, 199).

Thus, the emphasis when representing of semen in the context of sperm donation is on its potentiality rather than its physicality, and its status as 'life-giving' is emphasised over its viscosity.

Risky fluids, risky donors

Unlike some other kinds of donated tissue—eggs, for example—semen occupies a liminal space between life-giving essence and the 'waste' by-product of orgasm. Semen's status as a bodily secretion marks it as abject and dirty, as a substance that has transgressed bodily margins. Douglas (1966) argued that these bodily margins represent danger, as sites of potential pollution and contamination, and therefore so does any matter that traverses them, although the nature of these marginal dangers are culturally and temporally specific. A fluid that is considered abject in one culture may not be treated as such in all cultures; semen is not considered 'unclean' in many religious hygiene rules while menstrual blood is, even though both are linked to life-giving (Aydemir 2007, 10-11). Generally, however, those bodily fluids that are representative of procreation or digestion, such as semen, menstrual blood, or faeces, have the potential to symbolise social relations and processes (shared meals, sexual intercourse), which thus positions them as more polluting than other fluids such as tears (Douglas 1966).

In the modern cultural imaginary, semen as a bodily fluid is, along with blood, strongly associated with the transmission of disease, in particular sexually transmitted diseases such as hepatitis and HIV. While in the past, venereal disease was believed to originate from within women's bodies (see e.g. Walkowitz 1980), the modern 'AIDS epidemic' was popularly thought to flow from a 'reservoir' in gay men, through bisexual men and heterosexual women to heterosexual men. This is evident in the earlier prohibition of donation (of both sperm and

blood, to differing extents in different countries) by gay and other men who have sex with men. Waldby (1996) argues that feminine and feminised bodies have been positioned historically as 'entropic' in opposition to masculine order, and thus both women's and gay men's bodies have been defined as vectors of disease. This perhaps helps explain why the semen of gay men is considered inherently more 'risky' than that of heterosexual men; many sperm banks prohibit gay and other men who have sex with men from donation regardless how many partners they have had, whereas heterosexual donors could potentially engage in much riskier sexual behaviour without experiencing this prohibition.

Conversely, the most common situation in which semen is made visible as a physical substance is the so-called 'money-shot' in pornographic films. In pornography's display of semen on women's bodies, male sexuality is constructed narratively through the imagery of ejaculation (Aydemir 2007). In this sense, semen can be viewed as 'the visual evidence of the mechanical "truth" of bodily pleasure' (Williams 1999, 101). These images are strongly associated with masculinity and dominance, with higher quantities of semen standing in for higher power and potency (Thomson 2008). Semen as a visible substance thus serves as both evidence of male orgasm and of male virility, which encapsulates the ambivalent position of donor sperm in popular discourse.

In contrast, sperm donors are often seen as morally suspect, due to the association of sperm donation with masturbation and the consumption of pornographic material, and their motivations may be called into question, particularly by those who believe an 'altruistic' act should not involve bodily pleasure (Thomson 2008). Mohr (2014, 20) has argued that semen 'is a noisy actor that can matter in all kinds of ways besides being made sense of as a reproductive substance', where 'uncontained' semen represents inappropriate desire in donors. This fear of male sexuality and desire is evident in decisions and assumptions made about the type of people who might become donors; in 1958, a Government-appointed committee enquiring into the regulation of donor insemination in the UK suggested that men being required to masturbate to produce a sample might encourage the 'unbalanced' or 'psychopaths' to donate sperm (Speirs 2007, 50). As a symbol of male virility, therefore, the semen produced by donors represents the fertility that the sperm bank is selling, and its potential to create the 'precious gift' of human life. Yet, as a symbol of male orgasm, it also represents a potentially excessive, threatening, and dominating male sexuality.

'Good sperm'

There are a number of ways to scientifically measure the quality of a sperm sample. Sperm count is the term we are used to hearing in the media; this measure means, simply, the number of sperm present per millilitre of ejaculate. The measurement used within the sperm bank was generally 'sperm motility', which refers to the number of sperm cells that can move normally per millilitre of ejaculate. If semen is defined by its potentiality, we might argue that good sperm is any sperm that is capable of impregnating a woman, but not all sperm that is technically capable of producing pregnancy is suitable for use by the sperm bank. Preparing sperm for freezing dilutes the concentration of sperm cells in the sample, which means that the amount of sperm cells present in the sample before freezing needs to be particularly high in order to maintain a 'useable' level afterwards. As sperm may be sold with prices graded according to motility, certain concentrations of sperm cells are more valuable and useful than others. Moreover, sperm banks employ practices both social and technological to ensure that their product is safe from the kind of 'risk' described above. Moore and Schmidt (1999) label

this product 'technosemen', a substance created and constituted through careful screening of donors for particular characteristics, technological manipulation and analysis of semen, and marketing strategies. These include catalogues, in which donor characteristics—phenotypic, biological, and social—are highlighted to potential recipient parents in a way that implies that all such attributes are heritable, and that the semen is imbued with them (Moore 2007). Anthropomorphised sperm thus acts as a proxy for the men who provide it, and vice versa.

The falling Danish sperm count

Scientists in Copenhagen were the first to suggest that there was a falling global sperm count (Carlsen et al. 1992), and recent meta-analyses report a significant worldwide decline in sperm quality between 1965 and 2015 (Levine et al. 2017; Sengupta et al. 2018). There is evidence to suggest that this decline has been most rapid among Danish men in particular, although Denmark is also one of the countries for which the most data is available (Sengupta et al. 2018). Denmark's comprehensive central identity and health record system, together with the relatively small, homogenous, and stable population means that the country is often used as a site for demographic studies and clinical trials (Schmidt et al. 2015). Young Danish men's bodies are regularly surveyed. Compulsory national service requires a mandatory medical examination in order to determine whether they are fit to be conscripted at eighteen. In 2000, researchers used Danish conscripts undergoing their compulsory medical exams to investigate the issue of falling global sperm counts. They took semen samples from around 700 of these men, a procedure which is not normally a part of the examination, and found that many of them indeed had problems with their sperm (Andersen et al. 2000).

Since the 1990s, a number of possible causes for this decline have been investigated, including caffeine consumption (Jensen et al. 2010); sleep disturbance (Jensen et al. 2013); smoking (Jensen et al. 1998; Jensen et al. 2004); and living a sedentary lifestyle (Gaskins et al. 2014; Støy et al. 2004). While lifestyle factors may play a role, some studies suggest that environmental (Sengupta and Banerjee 2013), genetic (Shah et al. 2003), or epigenetic factors (Jensen et al. 1998; Jensen et al. 2004), are as or more important. However, the 'falling sperm count' discourse has taken root within the media both in Denmark and in wider contexts, with many news stories linking poor fertility with the behaviour of individual men (Barfoed 2014; BBC News 2013; Mølgaard 2013; Winston 2013). Along with these discourses comes the implication that poor fertility is a personal failing, and moreover a conflation of 'fertility' with 'potency'. This association is at the root of feelings of inadequacy and disrupted masculinity in men experiencing male-factor infertility (Hanna and Gough 2015; Mikkelsen, Madsen and Humaidan 2013; Sylvest et al. 2018; Throsby and Gill 2004). Indeed, images of hyper-fertility of the kind often found in sperm banks 'emphasise the virility of the donor, whilst at the same time stigmatising implicitly the kind of man who seeks help at a fertility clinic' (Adrian 2010, 398).

How, then, do sperm donors navigate the complicated and sometimes conflicting discourses around semen and donating sperm? This article draws on qualitative research with Danish sperm donors to explore how donors construct their identities as donors and as producers of 'good sperm', employing narratives about falling (global and Danish) sperm counts and embodied masculinity and virility.

The study

This study was based on qualitative research with 13 donors at several branches of a major Danish sperm bank. Recruitment to the study was challenging: participants were recruited by means of information leaflets placed in the reception area of the sperm bank, and later via direct email mediated by the sperm bank manager when the initial response rate proved to be low. A gift card was also introduced at this point at the suggestion of the sperm bank manager who believed that it would increase the willingness of donors to participate. A sum of 100DKK was chosen to be small enough not to persuade participants to take part for financial reasons, but enough to serve as a token acknowledgement of the expenses incurred during participation. Despite these measures, it still proved challenging to recruit men to the study; only 11 of the 110 donors contacted via email volunteered to participate.

There are a number of possible reasons for the difficulty faced in recruiting. The inherent secrecy and sexual aspects of sperm donation may have made some potential participants uncomfortable. It is also possible that this discomfort may have been exacerbated by the fact that the research was conducted by a woman, though evidence suggests that a male researcher may face different but related issues when interviewing men about sex (Grenz 2010). The interviews were conducted in English, which may have limited participant pool; however, the demographics of the eventual sample do not differ broadly from the demographic of the donor base at the time of the fieldwork. Finally, recruitment via email may achieve higher response rates when invitations come directly from a researcher rather than a gatekeeper (Sutherland, Amar and Laughon 2013); while it was not possible in this study, a more targeted email or face-to-face approach from the researcher may have been more successful. It is also possible that more donors could have been recruited to this study given more time. The small sample size limits the generalisability of the study but the broader themes emerging from the data may be useful in informing future research.

The main body of data collection comprised in-depth, semi-structured interviews, conducted either face-to-face, via Skype, or via email, according to the preferences of participants. There are benefits and drawbacks to internet-mediated research methods (Hesse-Biber and Griffin 2012; Lo Iacono, Symonds and Brown 2016). Asynchronous email interviews gave respondents longer to consider their answers than other participants; the lack of non-verbal cues may mean that some meaning was lost through email or audio-only Skype interviews; and even video-enabled Skype interviews may not afford the same chance to build rapport as in face-to-face interviews. However, these methods allowed access to donors who were otherwise unwilling to speak to a researcher in person due to privacy concerns. The topic guide included questions around motivation and choices; experiences of the donation process; relationships with other stakeholders (e.g. offspring, partners); and awareness of the broader context of donation (e.g. ethical debates). Interviews lasted between 60-90 minutes. They were transcribed verbatim and thematically analysed with the aid of NVivo software.

Donors were aged between 19 and 38. Eleven were white and two belonged to minority ethnic groups; additionally, one donor was not native to Denmark. Four donors were married with children. Of the unmarried donors, none had children, five were in a relationship and four were single. The majority were students, but other occupations in the sample included teaching and the military. Five of the sample were identity-release donors (i.e. they had chosen to allow their offspring to access information about them once they reach the age of 18) and eight were anonymous donors. All of the identity-release donors and five of the anonymous donors had also chosen the extended profile option; this consisted of additional

information provided via the donor catalogue, including a questionnaire answered by the donor about his interests and preferences. Most were established, current donors who had been donating for between six months and three years, with varying degrees of regularity. One donor had not yet made any donations, while three of the donors were planning to or had recently become inactive. All donors are referred to by pseudonyms within for confidentiality. The study was approved by the University of Edinburgh School of Social and Political Studies Research and Research Ethics Committee at Ethics Level 2, and by the Danish Data Protection Agency (ref 2012-41-0889).

Sperm quality and masculinity

Many donors described their desire to check whether or not they had “good sperm” as a motivating factor for donating, in some cases prompted by documentaries or news stories about infertility. Being told that one had ‘good sperm’ could also raise donors’ self-esteem and confidence:

The first donation they said that it is really good. The other thing that I came here for, I just remembered, was to check if I have good sperm. So. It’s really good, and I’m glad for it. (Frederik, anonymous donor)

I actually, I think when I started donating, when they accepted me as a donor... I became kind of confident in some way, because then I knew my sperm was alright, I guess (Jonas, anonymous donor)

I was dead proud [...] after the first donation, of course, they had to test the quality of my semen and they said it was really good. They probably do to most people in here, they say “Oh it’s brilliant, brilliant sperm” or whatever you want to call it. (Bent, anonymous donor)

These feelings contrast with the feelings of failure and threatened masculinity described in Danish men experiencing male-factor infertility (Sylvest et al. 2018). In donors’ accounts, “sperm quality” is strongly related to the potential for producing children and passing on their genes. However, even donors who had already fathered a child remained concerned with their sperm quality:

That’s actually the bonus of this, because you can be confirmed whether you are – I already have two children, so that’s a confirmation of itself, but you can be confirmed whether you are, you have the good abilities to reproduce yourself. And I’m very interested in these data. (Kasper, identity-release donor)

This suggests that there was a desire for scientific confirmation of “good sperm” in addition to the empirical evidence of reproductive potential.

However, donors often found the act of ‘handing over’ their sample to the (female) sperm bank workers to be uncomfortable:

Once I had, er [laughs] delivered my first sample which was [laugh/sigh] pretty nerve wracking, I mean come on, handing over bodily fluids to a strange woman – odd, to say

the least [both laugh]. I found it quite strange [...] and I remember leaving out the door and she said, “well, we’ll go and test it of course”, they didn’t know if they could use me at the time, she said “but it’s a nice, like a good quantity. Well done!” What the ... ! How do you respond to that?! (Andreas, identity-release donor)

Praise for the physical properties of a semen sample were met with discomfort by donors in contrast to the pride experienced when semen’s reproductive potential was affirmed. Even within the context of other forms of tissue donation, semen was understood as an exceptional substance:

Interviewer: How does it feel when it gets rejected?

Erik: Erm... disappointing, kind of. I think it’s in all guys like that, you know. They, er, they want to give a good... product. [...] But erm... yeah, you know. There’s nothing you can do about it. It would be like going to the blood bank and saying that your haemoglobin is too low. But... but here it’s kind of... different.

Interviewer: In what way is it different?

Erik: Because, erm, you know, there’s all these stigmas associated too. But no, I’m just saying that... er, you know, a rejected sample due to low count should, should mean the same as a low haemoglobin blood donation, but it just doesn’t because there’s so many, erm... [trails off]

A poor-quality blood donation is not understood to be a personal failure in the same way as a rejected semen sample; the stigma of the association between male-factor infertility with impotence challenges the masculinity of a donor who is unable to maintain the high-quality samples required.

Embodying sperm quality

In order to produce high quality sperm, donors discipline their bodies. All donors are asked to maintain a three-day period of abstinence from orgasm prior to donation, and many of them also perform other rituals of body maintenance, including altering their diet and exercise routine, and abstaining from alcohol in the lead up to donation. These rituals are related to both the production of an acceptable quality of sperm that will result in the desired level of payment, and also, crucially, to the production of a particular kind of ‘acceptable’ donor who will be permitted to donate sperm at all. One donor in the sample was required to lose weight before he could become accepted, for example. In order to produce ‘safe’ technosemen, donors must be free of sexually transmitted diseases. They undergo STI testing prior to becoming a donor and every six months afterwards, which means that they must practise safe sex. These pre-donation rituals could be a delicate balancing act with the potential for disruption to daily life and relationships. Lars described rejecting sex with his wife because he needed to abstain for donation purposes:

When I was very active as a donor, I needed, evidently, time to refill, recharge. And that put some limitations on the actual sex life of my wife and I, because, er, it sounds very silly but sometimes I actually would be like “Honey, I can’t because I have to go tomorrow and we’re in a place where we really need the money, and I really have to go

tomorrow!" [laughs] [pause] And... sometimes that actually, that would be quite inconvenient because... A long way down the road, you don't really plan for sex, it's just an impulsive, like, "Hey, I feel like having fun". (Lars, anonymous donor)

However, many donors were reluctant to actively abstain for donation and instead preferred to donate during a 'natural' abstinence period, even though abstinence is more concretely linked to the production of usable sperm samples than other behavioural changes. Lifestyle change was also not necessarily a guarantee that sperm quality would improve.

Almost all established donors had experienced having a sample rejected at least once. Some drew on 'common sense' discourses of masculinity rooted in biological determinism when reflecting on these experiences, linking their sense of disappointment in rejection to evolutionary tendencies or inherent qualities of testosterone:

I think there is a certain pride element in that, I think that's inherent to our testosterone-y, beast-y sides, our little reptile brain going "oh no!" every time we get the results, if it goes wrong [...] But that's again something you get used to. The first couple of times you're told, "well [lowers voice] that was a 30, that was a 30, this is only a 10" you go "only a 10?! what the, did I do something wrong, should I have a word with them?" [laughs] you know? You don't really know what to do. But they [the staff] say, you know, this is variation, it happens, it's a biological system for God's sake. [...] There is... you do feel that this is your baby, and it should be, it should be... when it fails, you're always a bit sort of "oh". (Andreas, identity release donor)

These discourses provided a framework for donors to understand their experiences. A number of strategies to resist this narrative of embodied shame emerged in the donors' accounts. Some donors made reference to things that might go wrong with semen samples during the cryopreservation process, after the sample has left the donor's control. Technological interference thus becomes a variable in good/bad sperm discourse:

Once in a while, it dies, when you freeze it, they say, or whatever. And the first time that happened I was like "Oh God, I'm a failure!" but apparently that happens to most people. And I don't have that high a failure rate so I'm still happy. But, er, it was quite – that was the first time that I really felt like this, ooh, this was then unpleasant. Because that's a sort of, a blow to your self-esteem a bit. That's like, "my soldiers, my soldiers! They died in an awful battlefield, it was horrible!" [laughs] Or something! "They were frozen, they all died! It's horrible!" but that's happened. Apparently, sometimes when they freeze it, in liquid nitrogen, of course, and they thaw it, you see, to see if they can survive the freezing, sometimes, for some reason, it doesn't happen. [whispers] They all die. So that's how you know! (Andreas, identity-release donor)

Although delivered in a somewhat humorous manner, Andreas uses the language of soldiers and battle to describe this instance of failure. Such military analogies, as well as other anthropomorphised discourses of sperm behaviour, are widely used in the scientific literature, forming a 'biological basis for responding to the contemporary crisis of masculinity' (Moore 2002, 106). Though the initial blame for the rejected sample falls on Andreas himself, the failure later becomes heroic: 'good' sperm cells die fighting against the encroaching technological enemy, as opposed to passively succumbing to it or having an innate weakness.

In this way, the donor's 'self-esteem', or masculinity, can remain intact even in the face of a poor sample.

Other ways of keeping self-esteem intact in the face of rejected samples included the conscious rejection of the regimens of bodily discipline some donors engaged in in order to ensure they produced a 'good' sample. Having a behavioural reason for rejection helped donors take failures less personally:

If I have some failed samples then it's nice to know if it's the motility or the count, and I can keep track of what I was doing three months before, because I'm kind of weird in that way! But yeah, you know, I've always been a person who likes information about anything. So, when they say, "it was rejected because of this and this and that", then erm, no it's nicer than just hearing that it was rejected (Erik, anonymous donor)

I take it quite personal when my sperm get rejected, because I do feel proud about having 'better-than-average' quality. It also gives me things to ponder about; lifestyle for instance. Knowing that when I go out drinking, my quality might not be up to par within a week, or doing drugs seriously affects the quality for a longer period of time (Daniel, identity-release donor)

Knowledge of a potential relationship between behaviour and sperm quality provided donors with a way to mitigate or transfer the blame for their failed samples from their bodies onto their actions. Isak, an anonymous donor, described seeing a difference in the acceptance rates for his samples during periods in which he did not drink, or smoke compared to those periods in which he had done so.

Isak: When I did most of my samples I was also working as a bartender and, like, I wasn't sleeping very much Friday and Saturday and I was also drinking a lot, smoking, and it was quite obvious how it affects your body, or that kind of the body system. And it was interesting to see after a weekend when I didn't drink a lot or smoke a lot it was way better. [...]

Interviewer: Did you ever consciously not drink and smoke before you donated?

Isak: No [hesitant and drawn out]. So... I was, I think it was only about every second or third sample who got approved. [...] I guess I have to meet some standards and if I don't, they just throw it out. Basically.

Interviewer: So how did you feel when it got thrown out?

Isak: Well, honestly, I didn't really care, because, I mean, again, well, ok, I took my bike, went down there, did that, went home, was it in vain? [pause] No, not really. Next time it got approved, and then... I, beforehand I knew that it was good enough sometimes. So, I mean...

Interviewer: Ok. So, knowing that was enough?

Isak: Yeah, that was enough. I mean, it was [rejected] because of my lifestyle, not because of my... genetics.

Isak's rejection of discipline and maintenance activities provides him with an 'excuse' for failed samples; he takes the blame for sperm quality onto his actions so that his inherent

masculinity is not challenged, as it has already been 'proven' through producing acceptable samples in the past.

Danishness and the falling sperm count

The bodily discipline engaged in by donors was strongly based in the discourse of the falling sperm count among Danish men, and donors invoked explanatory narratives including pesticides in the groundwater, junk food, mobile phone use, coffee and raised body temperature during interviews. Sperm donation was viewed by some donors as a way of checking whether any of these lifestyle factors had had an effect, with several describing it as their main motivation for becoming a donor. References to the falling sperm count often accompanied accounts of pride in having 'good sperm':

I was so proud. I was, I remember I was biking home and I had just one big smile on my face and I thought, "Yes! I've got good sperm!". But I couldn't tell anybody, I just didn't know what to do. How could I get this good news, you know, in Denmark we are very aware that the sperm count is falling rapidly and so getting the information that I was one of the good guys, in a way, was very good and very strange that I couldn't tell anybody. I think I told my brother quite quickly, since, in some way or other it affects him and he's closer to wanting to have children and so it was sort of a relief for him as well, actually, he was happy to know that we were probably alright in that area (Bent, anonymous donor).

In contrast to the prevailing narrative that poor sperm quality is attributable to lifestyle and behaviours, Bent suggests that his good sperm has a genetic basis and will be shared by his brother. Moreover, he creates a (moral) dichotomy between "good guys" who have "good sperm" and those don't, where "good sperm" appears to be bound up with ideas about national identity.

Similar feelings of national pride were invoked by Isak, who described disclosing to Swedish girlfriend that he was a donor during a heated argument in which he felt she was impugning the masculinity of Danish men:

She started talking about, "hey, I've heard about Danish men their sperm count is so low and we are so much better in Sweden" and then I kind of, like, got angry because I'm sure about the fact, the reason why we know it's so low in Denmark is because that Danish males are a large contributor to this sperm bank, so we actually have some true numbers on this. And I'm sure it's not a problem we have in Denmark but it's a problem we have in the Western countries (Isak, anonymous donor).

The idea that there is a wider falling Western sperm count mitigates against the accusation that Danish sperm counts are uniquely low, and positions Danish men as valuable contributors to broader scientific knowledge through their sperm donations. This ties strongly into the idea that having "good sperm" is a source of pride, and moreover that this is matter of *national* rather than individual pride.

One donor described his donation as having particular significance due to the sperm bank's lack of donors of his ethnicity:

If I were a woman seeking in-vitro fertilisation then of course I'd like to have a larger selection of donors. I think it makes a difference! Just to have a larger selection. Because I think if I were, you know, Caucasian, typical Caucasian, or even a ginger, then maybe the contribution wouldn't be so... significant. [...] And erm... I think, I'm pretty healthy. And I don't – I look ok! And, er, yeah. It's, I think if nobody else steps up to the plate then why not me? (Erik, anonymous donor)

Erik also reported that sperm bank staff had discussed the unmet demand for non-white donors with him. His call to 'step up to the plate' again evokes a moral imperative to donate for the good of others; in this case, he positioned his contribution of having particular value to recipients from a similar ethnic background to his own, either within or beyond Denmark.

Discussion

Donors employed narratives about the falling sperm count in constructing their identities as sperm donors. Being a donor could be framed as an act for the national good, in contrast to other negative or stigmatising images of donors, including those of the 'risky' donor or the deviant, overtly sexual 'paid public masturbator' (Thomson 2008, 98). Questions of national identity and fertility, for example, tie into broader issues around falling Danish birth-rates and the ageing population. The concept of 'responsible reproductive citizenship' reveals a moral imperative to use reproductive technology to the benefit of the nation (Carroll and Kroløkke 2017). Similarly, in Denmark, campaigns such as *Do it for Denmark*, launched by a travel agency to persuade Danes to have more sex, convey a duty to reproduce in order to reproduce the nation itself (Rothmar Herrmann and Kroløkke 2018). The donor, therefore, is able to fill the role of highly fertile, morally superior "good guy", dedicated to improving birth-rates or contributing to scientific knowledge.

However, issues of Danish national identity in the context of sperm donation go beyond national borders. The dichotomy of 'Caucasian' and other donors identified by Erik reflects the ways in which race and ethnicity are constructed within Danish sperm banks for the international (particularly North American) market. Kroløkke has described how national differences are subsumed into the label 'Caucasian/Scandiavian' in Cryos International's donor catalogue, arguing that 'whiteness, defined as 'purely' Scandinavian and pale skin, is the unmarked norm against which other identities on the donor list are racialized' (Kroløkke 2009, 15). The global 'brand' of Danish sperm draws upon a particular image of Danishness and masculinity: namely, the strapping, blond-haired, blue-eyed Viking who is young, fit and white. This image is widespread and pervasive; for example, a recent study reported that some Belgian recipient parents referred to their donor as 'Danish God' (Provoost et al. 2017). The invocation of tropes around Danish imperialism has implications for the construction of moral narratives of sperm donation to the national good—and, in light of the global nature of the falling sperm count discourse, the international good.

A thread of biological determinism underpinned some accounts: the idea that "men" as a group are programmed to think and behave in a particular way (Connell 2005). That men's pride and self-esteem was tied to the quality of their sperm was presented by some donors as a primordial biological response, and the scientific confirmation of having "good sperm" provided through the process of donation was a motivating factor and source of pride. Good sperm was considered to originate in the body, as a biological constant which could nevertheless be acted upon by external agents such as those invoked by the falling sperm

count discourse (mobile phones, chemicals, smoking) or the 'heroic failure' of technological interference during processing by the sperm bank. This is especially clear in the case of those who drew on their purposeful lack of adherence to maintenance rituals to mitigate the stigma of rejected samples. Donors were therefore able to satisfy their self-esteem with the knowledge that their bodies were scientifically proven to be capable of producing good sperm, with any deviation considered an anomaly caused by external factors.

Lifestyle was nevertheless invoked as a way of improving sperm quality, even for men who had already been accepted as a donor. There are some parallels here with fitness culture, particularly the ways in which lifestyle choices are implicated in the project of 'regulating normative masculinity' (Gill, Henwood and Mclean 2005, 60). Bodywork is often part of the project of masculine identity in sports players (Brown and Coupland 2015). The drive to produce the best sperm possible (rather than, say, 'good enough' sperm) and the resultant confidence boost echoes activities such as bodybuilding, in which an exaggerated appearance of fitness, rather than formal health maintenance, is the goal (Andrews, Sudwell and Sparkes 2005). Moreover, health and fitness movements can carry a moral imperative towards productivity and self-improvement (White, Young and Gillett 1995), and thus donors who engage fully in such activities may achieve moral satisfaction in attaining peak bodily performance.

Good sperm was therefore constructed as a product of personal physical, biological, and moral superiority, in contrast to 'poor sperm' which originates in external threats and undesirable lifestyle choices. Similar constructions can be seen in related areas where masculine superiority is challenged; blame may be shifted to a female partner during fertility treatment, for example (Inhorn 2003; Throsby and Gill 2004). This tendency to internalise areas of superiority and respond to threats to masculinity by externalising them is well documented in psychological studies of masculinity (Cramer 1991; Efthim, Kenny and Mahalik 2001; Simon 2011). The temporary context of the threat in the case of sperm donors—who can fall back on their initial acceptance as a donor as a kind of proof of masculinity—suggests that these responses may be common even among those whose masculinity is otherwise assured.

Limitations

There are several limitations of this study. The first lies in the small sample size. Although this limits the potential for making claims about the population of Danish donors, it does tell us something about the continuing difficulty of accessing members of this particular population for research purposes. In this paper, I have attempted to treat donors' narratives as individual narratives, and not necessarily as representative of all donors' realities. At the same time, however, there were themes that cut across all or the majority of accounts and we can make tentative claims based on these. A further limitation lies in the diversity of the sample; future research in this area would ideally aim to access more perspectives from non-white donors. Finally, due to the small sample size, it was not possible to draw comparisons between anonymous and identity-release donors. This again is a topic for exploration in future research.

Conclusion

In this study, 'good sperm' was understood by donors as a matter of innate physical and biological qualities, but which could be challenged by external threats. The discourse of the falling Danish sperm count provided donors with a framework for understanding their role as virtuous 'good guys' contributing to solving a crisis of infertility and low birth-rates both at home and internationally.

Funding

This paper is based on research carried out at the University of Edinburgh. The work was supported by the Innogen Institute under the James Jackson Studentship.

Acknowledgements

I would like to thank participants for sharing their stories with me, and Gill Haddow and Ann Bruce for their valuable support throughout the project. I also like to thank those who gave helpful comments on earlier versions of this paper, including members of the IHS Research Discussion Forum and two anonymous reviewers.

Conflict of Interest

The author declares that she has no conflict of interest.

References

Adrian, S.W. 2010. "Sperm Stories: Policies and Practices of Sperm Banking in Denmark and Sweden." *European Journal of Women's Studies* 17 (4): 393-411.

Andersen, A.G., T.K. Jensen, E. Carlsen, N. Jorgensen, A.M. Andersson, T. Krarup, N. Keiding and N.E. Skakkebaek. 2000. "High Frequency of Sub-Optimal Semen Quality in an Unselected Population of Young Men." *Human Reproduction* 15 (2): 366-72.

Andrews, G.J., M.I. Sudwell and A.C. Sparkes. 2005. "Towards a Geography of Fitness: An Ethnographic Case Study of the Gym in British Bodybuilding Culture." *Social Science & Medicine* 60 (4): 877-91.

Aydemir, M. 2007. *Images of Bliss: Ejaculation, Masculinity, Meaning*. Minneapolis; London: University of Minneapolis Press.

Barfoed, C. 2014. "Nu undersøgelse: Dansk druk-kultur bag dårlig sæd-kvalitet". TV2, October 3. <http://nyheder.tv2.dk/samfund/2014-10-03-nu-undersogelse-dansk-druk-kultur-bag-daarlig-saed-kvalitet>

BBC News. 2013. "Prolonged TV viewing linked to lower sperm count." BBC, February 5. <http://www.bbc.co.uk/news/health-21326810>

Brown, A.D. and C. Coupland. 2015. "Identity Threats, Identity Work and Elite Professionals." *Organization Studies* 36 (10): 1315-36.

Carlsen, E., A. Giwercman, N. Keiding and N.E. Skakkebaek. 1992. "Evidence for Decreasing Quality of Semen During Past 50 Years." *BMJ* 305 (6854): 609-13.

Carroll, K. and C. Kroløkke. 2017. "Freezing for Love: Enacting 'Responsible' Reproductive Citizenship Through Egg Freezing." *Culture, Health & Sexuality* doi:10.1080/13691058.2017.1404643.

Connell, R.W. 2005. *Masculinities*. 2nd ed. Cambridge: Polity Press.

Cramer, P. 1991. *The Development of Defense Mechanisms: Theory, Research, and Assessment*. New York: Springer-Verlag.

Douglas, M. 1966. *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo*. London and New York: Routledge.

Efthim, P.W., M.E. Kenny and J.R. Mahalik. 2001. "Gender Role Stress in Relation to Shame, Guilt, and Externalization." *Journal of Counselling and Development* 79 (4): 430-438.

Gaskins, A.J., M.C. Afeiche, R. Hauser, P.L. Williams, M.W. Gillman, C. Tanrikut, J.C. Petrozza and J.E. Chavarro. 2014. "Paternal Physical and Sedentary Activities in Relation to Semen

Quality and Reproductive Outcomes among Couples from a Fertility Center." *Human Reproduction* 29 (11): 2575-82.

Gill, R., K. Henwood and C. Mclean. 2005. "Body Projects and the Regulation of Normative Masculinity." *Body & Society* 11 (1): 37-62.

Grenz, S. 2010. "Desire to Talk and Sex/Gender Related Silences." In *Secrecy and Silence in the Research Process*, edited by R. Ryan-Flood and R. Gill, 54-66. London: Routledge.

Grosz, E. 1994. *Volatile Bodies: Toward a Corporeal Feminism*. Bloomington: Indiana University Press.

Hanna, E. and B. Gough. 2015. "Experiencing Male Infertility: A Review of the Qualitative Research Literature." *SAGE Open* 5 (4): 1-9. doi: 10.1177/2158244015610319

Hesse-Biber, S. and A.J. Griffin. 2012. "Internet-Mediated Technologies and Mixed Methods Research." *Journal of Mixed Methods Research* 7 (1): 43-61.

Inhorn, M.C. 2003. "'The Worms are Weak': Male infertility and Patriarchal Paradoxes in Egypt." *Men and Masculinities* 5 (3): 236-56.

Jensen, T.K., A.M. Andersson, N.E. Skakkebaek, U.N. Joensen, M. Blomberg Jensen, T.H. Lassen, L. Nordkap, I.A. Olesen, A.M. Hansen, N.H. Rod and N. Jorgensen. 2013. "Association of Sleep Disturbances with Reduced Semen Quality: A Cross-Sectional Study among 953 Healthy Young Danish Men." *American Journal of Epidemiology* 177 (10): 1027-37.

Jensen, T.K., T.B. Henriksen, N.H. Hjollund, T. Scheike, H. Kolstad, A. Giwercman, E. Ernst, J.P. Bonde, N.E. Skakkebaek and J. Olsen. 1998. "Adult and Prenatal Exposures to Tobacco Smoke as Risk Indicators of Fertility among 430 Danish Couples." *American Journal of Epidemiology* 148 (10): 992-7.

Jensen, T.K., N. Jorgensen, M. Punab, T.B. Haugen, J. Suominen, B. Zilaitiene, A. Horte, A.G. Andersen, E. Carlsen, O. Magnus, V. Matulevicius, I. Nermoen, M. Vierula, N. Keiding, J. Toppari and N.E. Skakkebaek. 2004. "Association of In Utero Exposure to Maternal Smoking with Reduced Semen Quality and Testis Size in Adulthood: A Cross-Sectional Study of 1,770 Young Men from the General Population in Five European Countries." *American Journal of Epidemiology* 159 (1): 49-58.

Jensen, T.K., S.H. Swan, N.E. Skakkebaek, S. Rasmussen and N. Jorgensen. 2010. "Caffeine Intake and Semen Quality in a Population of 2,554 Young Danish Men." *American Journal of Epidemiology* 171 (8): 883-91.

Kroløkke, C. 2009. "Click a Donor: Viking Masculinity on the Line." *Journal of Consumer Culture* 9 (1): 7-30.

Levine, H., N. Jorgensen, A. Martino-Andrade, J. Mendiola, D. Weksler-Derri, I. Mindlis, R. Pinotti and S.H. Swan. 2017. "Temporal Trends in Sperm Count: A Systematic Review and Meta-Regression Analysis." *Human Reproduction Update* 23 (6): 646-59.

Lo Iacono, V., P. Symonds and D.H.K. Brown. 2016. "Skype as a Tool for Qualitative Research Interviews." *Sociological Research Online* 21 (2): 1-15.

Mikkelsen, A.T., S.A. Madsen and P. Humaidan. 2013. "Psychological Aspects of Male Fertility Treatment." *Journal of Advanced Nursing* 69 (9): 1977-86.

Mohr, S. 2014. "Containing Sperm—Managing Legitimacy: Lust, Disgust, and Hybridity at Danish Sperm Banks." *Journal of Contemporary Ethnography* 45 (3): 319-42.

Mølgaard, M. 2013. "Forskere finder ny årsag til mænds dårlige sædkvalitet". *Politiken*, January 7 2013. <https://politiken.dk/forbrugogliv/sundhedogmotion/art5476103/Forskere-finder-ny-%C3%A5rsag-til-m%C3%A6nds-d%C3%A5rlige-s%C3%A6dkvalitet>

Moore, L.J. 2002. "Extracting Men from Semen: Masculinity in Scientific Representations of Sperm." *Social Text* 20 (4): 91-119.

Moore, L.J. 2007. *Sperm Counts: Overcome by Man's Most Precious Fluid*. New York and London: New York University Press.

Moore, L.J. and M.A. Schmidt. 1999. "On the Construction of Male Differences: Marketing Variations in Technosemen." *Men and Masculinities* 1 (4): 331-51.

Provoost, V., J. Bernaerdt, H. Van Parys, A. Buysse, P. De Sutter and G. Pennings. 2017. "'No Daddy', 'a Kind of Daddy': Words Used by Donor Conceived Children and (Aspiring) Parents to Refer to the Sperm Donor." *Culture, Health & Sexuality* 20 (4): 381-96.

Rothmar Herrmann, J. and C. Kroløkke. 2018. "Eggs on Ice: Imaginaries of Eggs and Cryopreservation in Denmark." *NORA - Nordic Journal of Feminist and Gender Research* 26 (1): 19-35.

Schmidt, M., S.A. Schmidt, J.L. Sandegaard, V. Ehrenstein, L. Pedersen and H.T. Sorensen. 2015. "The Danish National Patient Registry: A Review of Content, Data Quality, and Research Potential." *Clinical Epidemiology* 7: 449-90.

Sengupta, P. and R. Banerjee. 2013. "Environmental Toxins: Alarming Impacts of Pesticides on Male Fertility." *Human & Experimental Toxicology* 33 (10): 1017-39.

Sengupta, P., E. Borges, Jr., S. Dutta and E. Krajewska-Kulak. 2018. "Decline in Sperm Count in European Men during the Past 50 Years." *Human Experimental Toxicology* 37 (3): 247-55.

Shah, K., G. Sivapalan, N. Gibbons, H. Tempest and D.K. Griffin. 2003. "The Genetic Basis of Infertility." *Reproduction* 126 (1): 13-25.

Simon, R.M. 2011. "Gendered Contexts: Masculinity, Knowledge, and Attitudes Toward Biotechnology." *Public Understanding of Science* 20 (3): 334-46.

Speirs, J.M. 2007. "Secretly Connected? Anonymous Semen Donation, Genetics and Meanings of Kinship." PhD diss., University of Edinburgh.

Støy, J., N.H. Hjøllund, J.T. Mortensen, H. Burr and J.P. Bonde. 2004. "Semen Quality and Sedentary Work Position." *International Journal of Andrology* 27 (1): 5-11.

Sutherland, M.A., A.F. Amar and K. Laughon. 2013. "Who Sends the Email? Using Electronic Surveys in Violence Research." *Western Journal of Emergency Medicine* 14 (4): 363-69.

Sylvest, R., J.K. Furbringer, A. Pinborg, E. Koert, J. Bogstad, K. Loessl, L. Praetorius and L. Schmidt. 2018. "Low Semen Quality and Experiences of Masculinity and Family Building." *Acta Obstetricia et Gynecologica Scandinavica*. 97 (6): 727-733.

Thomson, M. 2008. *Endowed: Regulating the Male Sexed Body*. New York: Routledge.

Throsby, K. and R. Gill. 2004. "'It's Different for Men': Masculinity and IVF." *Men and Masculinities* 6 (4): 330-48.

Waldby, C. 1996. *Aids and the Body Politic*. London: Routledge.

Walkowitz, J.R. 1980. *Prostitution and Victorian Society: Women, Class, and the State*. Cambridge: Cambridge University Press.

White, P., K. Young and J. Gillett. 1995. "Bodywork as a Moral Imperative: Some Critical Notes on Health and Fitness." *Loisir et Société / Society and Leisure* 18 (1): 159-81.

Williams, L. 1999. *Hard Core: Power, Pleasure, and the "Frenzy of the Visible"*. Berkley and Los Angeles: University of California Press.

Winston, R. 2013. "Relax, couch potatoes – your sperm is safe." *The Guardian*, February 6. <https://www.theguardian.com/commentisfree/2013/feb/06/relax-couch-potatoes-sperm-safe>