AIMS For a better birth...

Pregnancy apps and social media – are we being watched?

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Editor's note: We are all to a greater or lesser extent, wittingly or unwittingly shaped by the society in which we live, and when society moves online, this continues to be true. In her potentially controversial article, Frances Attenborough gives an account of what the literature has to say about the hidden forces at play in our use of social media, forces that may not always be to the benefit of the user. With more awareness of these issues, Frances believes that women, as they become mothers, can experience increased agency and satisfaction in their online lives.



By Frances Attenborough

Pregnancy is a time of change for many women. McMahon[1] describes it as a process of *becoming*, of exploration into and trying on of motherhood. Whereas previously pregnant women might have turned to others around them for support and information, nowadays many women turn to apps and social media for these things[2] and to help with decision-making.[3] In this article, I'm considering both apps specifically targeted at women as 'pregnancy apps' and social media apps that pregnant women happen to use. This is a world of convenient, reassuring information and easy connection with others, which has real importance for maternal well-being, particularly in times of a pandemic. Just as Das[4] argues that there are potential downsides to the social networking side of app use in the perinatal period, are there other potential hazards that women might want to be aware of? In this article I shall be considering the

potential surveillance concerns around app use and what the consequences might be.

As John Donne wrote, '*no man is an island*'; we are all of us products of our culture. Social learning theories postulate that as a social species, we learn by observing and imitating those around us. As Yate[5] describes, 'we […] copy those around us and seek their approval, even if it costs us our health.' Thus, as we spend more time using social media, we become more absorbed into the culture that is there. What is more, this is a world that we are increasingly comfortable with, as it becomes the new normal.[6] For example, pregnancy apps frame it as normal to track every aspect of a pregnancy and to share this with others.[7] In the world of social media, we are encouraged to share our personal stories and feelings; they are meant to be viewed. We become 'object[s] of surveillance.'[8] Furthermore, the observers are invisible, with no way of knowing who is watching.[9] Parallels can be drawn with Bentham's Panopticon.

The Panopticon was originally a theoretical prison constructed so that one person (the guard) could see all the prisoners without the prisoners knowing whether or not they were being watched. As a result, the prisoners would change their behaviour. Michel Foucault[10] identified that all hierarchical systems follow this power structure; those with lower status conform through self-policing just in case they are being watched by those with power. Elmer[11] explores how this theory can be applied to an online world with surveillance at its heart. Couch *et al.*[12] suggest that the panopticon works in a symbiotic relationship with the synopticon, where the many gaze upon the few, such as when we read or watch media stories about celebrities or reality TV programmes. This becomes a form of social control because it is those with power that are presenting stories to be consumed by the masses that fit with their agenda. The spectacle inherent in these stories (to make them entertaining) warps what could be considered normal. For example, consider how childbirth is portrayed in reality TV shows such as *'One born every minute,'* with its bias towards the normalisation of medicalised birth and lack of consent.[13] Mitrou *et al.*[14] use the term 'omniopticon,' in which the many watch the many, to describe social media. We are all expected to watch and comment on each other, to judge others and to be judged.[15]

These three systems are able to work together to maintain a hegemony because humans are a social species. Our place in the hierarchy is determined by how popular we are. When our social status decreases, our cortisol levels go up; the reverse is also true.[16] Now we can quantify exactly what our social status is by how many 'likes' we get. As more and more gets shared, it becomes necessary to provide ever more 'spectacle' to keep getting noticed and liked.[17] Not only can we create an online identity that is more than ourselves, the ourselves we aspire to, but it becomes necessary to do so, in order to fit in.

I have chosen to concentrate on how apps and social media change women's expectations because our society is both patriarchal and misogynistic. Women are constantly judged from a young age, usually as wanting.[18] This judgement continues when a woman becomes a mother. Taylor[19] describes the 'Madonna-whore complex' through which women are either considered as 'mothers' (nurturing and selfless) or 'whores' (promiscuous and sexual). Yate[20] places Western society's image of motherhood in a historical context, explaining how the 'cult of maternity' developed in the 18th century. In the cult of

maternity, a mother's primary concern should be to nurture her child, and thus all her needs are met through this act. A mother's love is absolute and seen as the 'highest form of love'. This ideal of motherhood puts mothers on a pedestal and yet at the same time all of society's ills are laid at their door.21 Our culture presents it as a pregnant woman's duty to protect her baby at all costs and woe betide her if she gets something wrong – that makes her a 'bad mother.'22 It is seen as a citizen's duty to criticise a pregnant woman in public, thereby enabling the mother to become a better mother23 Various authors noted that pregnancy apps reinforce cultural stereotypes (for example, finances are covered much more in pregnancy apps targeted at fathers) and pregnancy and birth are portrayed in a way that reinforces the cultural view that they are risky processes.24 Furthermore, they depict as essential that a woman achieves a perfect pregnancy.25 Thomas and Lupton26 argue that whilst using apps can be beneficial for pregnant women, being a source of support and information, they can also increase anxiety and feelings of self-responsibility and blame.

As a result, a pregnant woman will then strive to do things 'right', to be a 'good mother'. The literature describes a pregnant woman as being considered a 'good mother' if she is seen to: comply with and submit to doctors, accept that her body will not be enough, always put the baby (and others) first no matter what the cost to her, be solely responsibility for the baby's safety, and accept that she will always be watched and judged by others.27 If she does not display how good she is, she will be judged to be irresponsible and neglectful. These issues have been further exacerbated during Covid-19 restrictions28 Apps situate themselves as providing 'the answer', helping a woman to be a 'good mother' yet all the while reinforcing the status quo and gendered stereotypes because it helps to increase in-app purchases or advertising revenue. It is in the interest of an app developer to make their app appealing and addictive, and for users to be compliant and willing.29

Whilst it can be argued that posting on social media can be empowering as the user controls what is posted, the panopticon / omniopticon theory reminds us that posts are always subject to self-monitoring because if something isn't liked, the user's status is lowered.30 Social media is creating a world that has the appearance of being a place of freedom and self-expression, yet it is really reinforcing the existing hegemony. Thus, whilst birth is generally celebrated, women are shut down by others for having the 'wrong' birth.31 The effects are toxic; for example, as more dramatic births get shared and seen as normal, tokophobia increases.32

Apps are big business, despite users being unwilling to pay much for them upfront.33 The majority of apps (including those targeted at pregnant families) are owned by commercial companies, which includes breastmilk substitute manufacturers.34 Users state that they would rather avoid such apps;35 however, Haddad *et al*.36 found that apps developed by health care providers tended to have unfriendly user interfaces and to have ignored the complex systems and work processes that they are trying to ease.

Some apps have been developed either by or to be used in conjunction with health care professionals and providers. It is noticeable that the benefits of these apps are given in terms of benefits to health care professionals and providers, such as how well women conform to the system, not in terms of outcomes

for mothers and babies.37 Looked at through the lens of the panopticon, it is a clear example of how apps reinforce the current hegemony, with little regard to the mother.

As internet use has increased, so too has awareness of the dangers of sharing information online38 App developers make money by selling on harvested data; the user **is** the commodity.39 Research by Zimmeck *et al.*40 demonstrates that a significant proportion of apps do not have privacy policies, and of those that do, when the code was scrutinized it was found that many of the apps did not follow them. Liao *et al.*41 suggest that there may be similar issues with voice-operated apps. It is not easy to opt out of sharing data without compromising the functionality of the app, something Barassi42 describes as coercion. Risks can also come from family and friends unthinkingly sharing information without permission. Hargittai and Marwick43 found that users are aware of these risks and how hard it is to avoid them. During pregnancy, parents not only share their own data, but also that of the baby. The baby has been forced into having an online presence before they are even born.44

What we see in apps and on social media feeds is controlled by algorithms created by app developers, as per the synopticon. Furthermore, the data we share affects these algorithms, potentially forming a feedback loop of what we share being influenced by what we have seen, and in turn influencing what we will see.45

The friend in your phone is always there, always watching, and as Lyons46 points out, it fits in around your daily life. The friend in your phone pushes notifications at you, encouraging you to share more, to personalise more, to develop reliance upon it.47 Users prefer apps that are personalised,48 even though this comes from sharing more with them.

App users are often aware that their data will be shared with all and sundry. Women report feeling 'used' by apps.49 As Sacacas50 observes, app users balance the gains they make from the app against the privacy risks, with users being more likely to share data when it is seen as being socially relevant51 The only alternatives to sharing are to try to circumnavigate the app settings or to not use the app at all52 Not using an app comes with its own problems, however. Withdrawal / non-use can be seen as being selfish or a bad mother, because the woman is opting out of what is seen as the best possible care53 During lockdown, social media has become a literal lifeline for some54 Contributing on a social forum can enhance a person's reputation and increase their feelings of personal satisfaction because they have helped someone else.55 Johnson56 points out that mothers can gain self-worth through their virtual, shared pregnancy. Those seen to be paying close attention to the development of their baby and to be sharing this are seen as being an appropriately caring and responsible mother57

On the other hand some argue that sharing information about the baby is problematic, in part because the baby has not consented. By suggesting to a mother that she not use an app because it may put her unborn baby's data at risk, I may be contributing to the societal norm that puts her baby's needs above her own, when I hold strongly that this is her decision, and hers alone. However, it can only be a conscious decision, when the mother is aware of the debate

So what conclusions can we draw? No app is neutral; there is always an agenda behind the development of an app.58 Whilst some apps are purely commercial, others are developed to meet a need that someone thinks women have; for example, those developed by health care providers, ostensibly to reduce inequality. All involve monitoring the woman in some way. Using the lens of the panopticon, it becomes clear how observation changes the way people behave: they comply with the societal norms in order to be liked, to feel good about themselves and because they see the benefits as outweighing the risks. The consequences for pregnant women around consent, informed decision-making, expectations of birth, and mental health have the potential to be detrimental, but so does not joining in. Acknowledgement of the hidden forces at play within social media, is not to frame women as victims. Increased awareness strengthens women's agency and enables them to navigate those forces to their own good. It seems to me the way forward may be in creating spaces where realism flourishes and where women can 'build their village', communicating together through social media with an even greater sense of control, autonomy and satisfaction.

Frances Attenborough lives in the North West of England and originally pursued a career in Materials Science before having children and realising that supporting mothers was much more worthwhile.

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