

Period-tracking apps: how femtech creates value for users and platforms



For many women in the world, menstruation is the most dreaded time of the month. Some societies regard menstruating women as being in need of rest and requiring isolation during the days in which they bleed. Across many contexts, the idea that women are unclean during menstruation has been normalised. Some men have held the belief that contact with menstrual blood or with a menstruating woman can “... sicken a man and cause persistent vomiting” ([Douglas 2002:182](#)) and that they would “...become ill if they are touched by or use any objects that have been touched by a menstruating woman” ([Frazer 1951:533](#)).

In Northern European visual culture, menstruation is considered ever “dirty, disgusting, and embarrassing” ([Søndergaard 2015:42](#)) and in Japan as causing “imbalance in taste” ([Goldberg, 2015](#)). Nepalese menstruating women are isolated in *chhaupadis* as their blood is seen as toxic. Banishing menstruating women from social practices has been linked to religious views, with some Hindus regarding menstruating women as ritually impure. Certain Buddhists prohibit them from entering temples. Likewise, women are not allowed to enter Shinto shrines during menstruation, and instances exist where they have been banned from climbing sacred mountains due to their perceived impurity. Immersion in cleansing baths is part of Orthodox Jewish menstruation rituals ([Webster, 2017](#)), while some Christian church fathers defend the exclusion of women from ministry reasoned on the premise of uncleanness ([Ranke-Heinemann, 1990](#)). Jain texts state that menstruation kills micro-organisms in the body, making women more prone to violence than males.

Across most cultures, shame continues to be associated with menstruation with most women believing that it is at least good manners, and sometimes necessary, to hide evidence of menstruation from public view if not also in private ([Chrisler, 2011](#)). Many regard menstruation as the “ultimate taboo” ([Buckley and Gottlieb, 1988 –introduction](#)). But digital technologies today are thought by many to provide a solution. This essay explores how digital period trackers create economic value in exchange for providing a sense of period cleanliness and personal space while engendering greater self-understanding for menstruating women. However, this comes at a cost.

Blood money

The global market for all digital technology-based products and services focused on women's health could be worth US \$50 million by 2025. For women who access digital technologies, period tracker apps (PTAs) are part of a fast growing femtech product market. PTAs enable the observation and analysis of menstrual cycles and a wide variety of related factors. They can be used to monitor menstruation as well as produce workout patterns, nutritional regimes and family planning tailored to body cycles. Their home screens usually display a numerical countdown and/or graphic illustrations of the number of days to the beginning of the next period or ovulation. Most PTAs further enable menstrual cycle-related factors such as pain, mood swings, sleep patterns, contraceptives, sex life, effluvia, vaginal discharge, medications, food cravings and physical activity to be tracked. Menstrual calendars are part of most apps which also give graphical, tabular and numerical depictions and statistical information on, for instance, average cycle lengths, changes in body weight, body temperature etc. Some PTAs also give access to online forums and allow interaction with other users and non-users ([Levy and Romo-Avilés, 2019](#)).

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Using PTAs requires personal data about one's body to be given away. The PTA user has to commit to the idea of enabling algorithmically generated data to be processed into calculative outputs that are personalised on an ongoing basis with the user's data inputs. A feedback loop between the app and the user is created where continuous data exchange fine-tunes the self-tracked digital output. Purportedly, the greater the level of information given up, the greater the accuracy of feedback from the app. As [Karlsson \(2019: 119\)](#) explains: "...to gain knowledge about one's own body entails giving away access to data generated from that same body." The PTA user becomes, in essence, a "prosumer" – producing as well as consuming the data ([Phade, 2018](#)).

Dozens of PTAs exist today with gynaecology and obstetrics (G & O) experts extensively advocating their use. G & O Professor Kudesia says of a PTA: "I like its clean, modern interface, the impeccable science behind it, their transparent citation of supporting data". She notes the importance of keeping track: "If something suddenly changes with your cycle, or your period is late, you may not realise it right away if you're not keeping track". Habitually updating the app ensures it is 'really' accurate ([Bradley and Bacharach, 2019](#)). Professor Dweck, another G & O expert, suggests that "the longer you are tracking your cycle, the more data the app's algorithm has to work with, and the more likely it is to be correct." Data accuracy and reliable user information input are essential to maximise the usefulness of PTAs.

We are accustomed to think that if we reveal something about ourselves in a particular context, then this will not be shared without our consent. Privacy of information has been a 'key organising principle of social life' ([Nissenbaum, 2010:231](#)). But this is not entirely so in the digital economy where "organising principles" are shifting. PTA data do not conform to long standing social expectations about privacy that tend to be presumed in most cultures. On the web, a woman's body data becomes everybody's data. To deliver value, a woman's intimate bio-data is to be extracted, analysed and re-packaged into information that has significance. It must be integrated into macro-data to be relevant to the user, which also means it has to have commercial, managerial, and research value in a form that is commodifiable and re-sellable ([Sanders, 2017](#)).

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PTA users tend to be unaware that when a user inserts personal information into a PTA, that information may also be sent to third parties. A number of apps have been reported to be "...sharing some data with Facebook even before the user agrees to the app's privacy policy" ([Rajagopalan, 2019](#)). This can include deeply personal information about women's health, moods, sexual practices etc. ([Brown, 2019](#)). The intent is typically to deploy user data to send out targeted adverts or to develop consumer related correlations that have commercial value to the app provider. Advertisers want to monitor consumers' moods and desires as this assists in making product offerings at times the PTA users are most likely to make purchases. For instance, women who are pregnant (or who want to be), will show shifts in their shopping behaviours. This can be useful market segment information to target the most viable consumers. Most femtech app users willingly commit to providing personal data in order to get personalised data. Underlying this willingness is perhaps the notion that: "People are inherently interested in themselves... because to be a person can be challenging." ([Wolf cited in Krett, 2018](#)). Giving up personal information faces less and less challenge when it delivers new insights about oneself. If that also creates economic value then femtech offers extreme potential for market growth.

Quantifying spills

There may be value in technology that allows the conversion of "...seemingly useless excess, the waste of the bodily system, into useful, exchangeable data" ([Søndergaard 2016:45](#)). After all , this is not new. Quantification has played a role in assessing the health of women long before the rise of PTAs. In ancient Greece, if a woman bled in a manner considered at variance with what was seen as normal in terms of number of days and amount of bleeding, she would have been considered infertile or suffering pathologies ([Dean-Jones, 1989: 181](#)). The datafication of menstruation holds much value. It can distance one from having a sensory awareness of the smell, colour, texture or the visceral experience of "feeling" a period. It can remove the person from the socio-behavioural dynamics of menstruating. Importantly, calculations centred on menstrual blood can provide a clean representation of information about a woman's body. Quantification disinfects the dirt that inhabits the reality of the object being quantified. It creates mathematical distance from the embodied perceptual reference points inherently part of the menstruating physique.

Data placed in the hands of women may be seen as not only cleansing the awareness of their cycles but empowering them. PTAs give women access to the privileged world of "dataism" offering them a higher "standard of knowledge about human behaviour" ([Dijck 2014](#)). Some would say, it provides the "power to de-stigmatise, radicalise, and feminise the non-inclusive patriarchal structures that have so far framed women's health and autonomy" ([Bhattacharya, 2019](#)). Still, measurements of menstrual blood in the hands of a woman can be viewed as enabling menstruation to be intelligently managed. Indeed, if PTAs permit the control of menstruation so it can be improved upon, what's not to like?

Purification for greater self-understanding

If everything a person produces is part of them, it also has its own way of being. Once what is produced is digitised, our perception of things change. And where digital information is exchanged across platforms, the dualism we perceive between heteronomy and autonomy also gets altered. Digitisation shifts what we know of the object-subject dichotomy. When things become connected, including ourselves to each other, our notion of how we relate to things becomes different. Digital trackers render less visible the line between technology and the body. As Capuro ([2017:277](#)) notes: "Digitisation changes the anthropological self-understanding of encapsulated world-less subjects facing objects in the so-called outside world". When we alter how we perceive an object, we also decentre how we make out our awareness of things via the interplay between the subject and the object. PTAs deeply affect this interplay because of their reliance on data input relating to the intensely personal.

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Through quantification, menstrual-related data can cleanse the reality of what is measured. Data sanitises what may have come to be considered as unclean. They provide a basis for purity, making more manageable the dualism between the subject and the object of the data ([Capurro, 2017](#)). The distancing from the unclean that quantification proffers and the calculative engagement of the self with that produced by the self, promote an internal understanding of how to systematically manage one's being. As such, digital self-trackers become normalising bio-political instruments drawing upon privileged notions of what should constitute effective health control.

PTA users engage with calculative forces that quietly prescribe bodily aspirations. They instil reflexive self-monitoring practices with a legitimacy that draws on the interpellation of individuals in relation to other app users and wider population data. As such, PTAs are digital 'technologies of the self' that '...permit individuals to [reflect and act] on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality' ([Foucault 1997: 224](#)). PTA users abide by statistical standards against which comparisons can be made and toward which they become compelled to assess themselves. They mobilise, in the process 're-sponsibilising' norms ([Brown, 2015: 132–4](#)) serving as 'regulatory ideals' ([Butler, 1993: 1](#)). Ultimately, PTAs make suggestions as to normative behaviour in the light of tracked menstrual data, to cultivate women's self-discipline.

Closed spaces that liberate

PTAs' calculative outputs reveal as much as they hide. They carry presumptions of truth embodying understandings of medical science, the legitimacy of big data analysis and the propriety of algorithmic complex functions. They are presented as customisable private platforms to enable women to act with freedom on data that is seemingly transparent, robust and objective. In doing so, digital apps also offer the basis for re-stabilising conventional gender arrangements and prescribed conceptions of femininity. PTAs embody a potential for reflexive expression and understanding of one's being. They offer women a wilful gateway to self-care and self-knowledge that embodies truths which elsewhere take more suppressive forms.

PTAs silently advance idealised notions of calculative and transparent private spaces. They re-constitute their users as free and responsible individuals who end up toeing the line established within more covert and coercive regimes of power relations. PTAs are digital *chhaupadis* that are algorithmically constructed to endow a sense of liberation and self-knowledge. They are today's technologically intelligent solution offering women private spaces that uphold invisible structures of the feminine ideal. PTAs are the ultimate platforms making public the deeply personal to create economic value.



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