



Autobiologies: Making sense of engagements with healthcare technologies

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Abstract

In this article we put forward “autobiology” as a concept for understanding how individuals make sense of their bodies and biologies, using information gleaned from medical devices and tests that are administered outside of clinical settings. We provide examples of direct-to-consumer genetic testing, home pregnancy kits, and the quantified-self movement. We argue that “autobiology” provides a valuable counterpoint to “biosociality”. Autobiology captures people’s sometimes playful engagements with these health technologies, and their greater entanglement with corporate interests through the ways in which people provide data for subsequent use by companies. We examine how new technologies provide people with information, and also how they use digital technologies to tell their stories, via *YouTube* for example. In the final section, we explore the possibilities for using auto/biographical methods for exploring people’s changing relationships with medical devices.

Keywords

Technology, autobiography, narrative, genetics, health, biology.

Autobiologies : Donner un sens aux engagements avec les technologies de soins

Résumé

Nous introduisons dans cet article le concept d’ « autobiologie » pour comprendre comment les individus font sens de leurs corps et de leurs biologies, dans les cas d’utilisations d’informations collectées par des appareils et examens médicaux administrés en dehors d’un contexte clinique. Nous illustrons nos propos avec les tests génétiques (vendus) « directement- au-

consommateur », les tests de grossesse à utilisation domestique, et le mouvement de « mesure de soi ». Nous affirmons que l' « autobiologie » apporte un contrepoids de choix à la « biosocialité ». L' « autobiologie » saisit la dimension parfois ludique de l'engagement des personnes avec ces technologies médicales, ainsi que l'enchevêtrement accru des utilisateurs avec des intérêts commerciaux, par les manières avec lesquelles les personnes fournissent des données à l'usage des entreprises. Nous étudions comment les nouvelles technologies apportent des informations aux personnes, mais aussi comment les individus utilisent les technologies digitales pour raconter leurs histoires, en utilisant *YouTube* par exemple. Dans la dernière section, nous examinons dans quelle mesure il est possible d'utiliser des méthodes autobiographiques pour mettre à jour la relation changeante des personnes avec les appareils médicaux.

Mots-clés

Technologie, autobiographie, récits, génétique, santé, biologie.

Autobiologías: dando sentido al involucramiento con las nuevas tecnologías de la salud

Resumen

En este artículo introducimos el concepto de "autobiología" para comprender cómo los individuos dan sentido a sus cuerpos y a sus biologías, utilizando la información obtenida de dispositivos y pruebas médicas que son administrados fuera del contexto clínico. Ilustramos nuestra propuesta con el ejemplo de la prueba genética "directa para el consumidor", los kits de embarazo caseros, y el movimiento de auto-cuantificación (*quantified-self*). Sostenemos que la "autobiología" ofrece un valioso contrapunto a la "biosocialidad". La autobiología captura los compromisos a veces lúdicos de las personas con estas tecnologías médicas, así como su mayor entrelazamiento con los intereses corporativos a través de las formas en que las personas proporcionan datos para su posterior uso por parte empresas. Examinamos cómo las nuevas tecnologías proporcionan información a las personas, y también cómo éstas utilizan las tecnologías digitales para contar sus historias, por ejemplo a través de *YouTube*. En la sección final, exploramos las posibilidades de utilizar métodos auto/biográficos para explorar las relaciones cambiantes de las personas con los dispositivos médicos.

Palabras clave

Tecnología, autobiografía, narrativa, genética, salud, biología.

1. Introduction

I picked up a small package one morning when I got to work, and opening it, found a shiny white box with the candy-coloured *23andMe* logo. I remembered that I had signed up for a *23andMe* genetic test as part of a research project. In my professional life, I spend a lot of time thinking about genetic tests. I knew that receiving genetic test results in the form of risk information was unlikely to affect me greatly or induce me to change my lifestyle; so I wasn't particularly worried about the process. I spit into the tube, sealed it into an envelope, and posted it back.

That spit took a journey from England to California; the results pinged back to me via an email link. The invitations to share "my information" began with the first email. I didn't login to my results immediately, but emailed a friend, worried about what it might mean for my son. When I did look, I sighed with relief. I was at greater than average risk of deep vein thrombosis, no surprise to me given the roadmaps of ropey veins on my legs and those of my father. Nothing else jumped out at me as surprising or worrying (that's me, nothing dramatic!). Since then, I continue to receive emails from the company telling me about new health-related reports (still no drama), or non-health related trait results such as, recently, preference for sweet not savoury (they got that wrong! Pretzel over biscuit every time for me!). There are numerous ways in which I could engage with this "genetic me" – ancestry reports, research surveys, potential distant cousins I could contact, blog posts from more engaged others, all presented with chirpy enthusiasm. I really should do more with myself here, I thought!

Storytelling is an important way in which we make sense of not only our experiences of health and illness (Frank, 1995) but also our engagements with healthcare technologies. As Susan's account (Susan Kelly, one of the authors of this paper) above shows, stories help us to make meaning from materials, encounters and scientific information. Stories can be told in a myriad of ways. They can be written, spoken, told through pictures, numbers, video recorded, or any other way in which one wants to narrate. The ways in which these stories are told is just as important as what is told (Gubrium & Holstein, 1998). New technologies not only alter the landscape of the kinds of stories we tell but also the ways in which we tell them and their availability. In this article we examine a form of narrative which we suggest emerges from the introduction of new healthcare technologies: autobiologies.

"Autobiology" is the term we use to describe the study of and story about one's own organism. Derived from the term autobiography, this is a story that encompasses the biological; a study of one's life including the molecular, the cellular, the genetic, the physiological and/or other biological elements. We argue that such autobiologies are told in the context of

encounters with one's own biology that are being reconfigured with the introduction of new technologies. The article explores examples such as direct-to-consumer (DTC) genetic testing, the home pregnancy kit and self-monitoring devices. There are several common features of autobiography that we find in these settings.

First, through these technologies, testing and monitoring of healthcare may travel outside the clinic. Genetic testing moves from the clinic into bedrooms, pregnancy testing from doctors' offices into bathrooms, and heart-rate monitoring from the hospital onto the streets during one's morning walk. Second, the context of storytelling differs from the more classical sociological genre of the illness narrative, in that the storytellers are not framed principally as patients, as they are not unwell. These could be instead considered "patients-in-waiting" as Timmermans and Buchbinder (2010) may have termed them. Third, autobiologies are characterised by a temporary engagement with health, illness and biology. Again, unlike pathobiographies or illness narratives where illness becomes an important part of one's identity, autobiologies are fleeting engagements. Fourth, unlike the narratives of patient activist groups, who use stories as a powerful means for influencing community research and therapeutic agendas, autobiologies focus very much on the individual, on the self. As such, there are elements of narcissism and performance of celebrity or micro-celebrity (Marwick & boyd, 2011). Stories may be connected, but not through a shared patient experience or diagnosis but rather through shared engagements with technological platforms, a form of collective individualism occurring in the context of networked publics (boyd, 2014).

This last feature of autobiologies in particular, suggests a very different kind of engagement with healthcare technologies than is conceptualised through terms such as biosociality. Biosociality was initially considered by Rabinow (1996) as the possible arrangement of groups formed around life at the molecular level, around chromosomes and alleles, where those with shared genetics would develop shared traditions and narratives to help understand their fate. The term was further developed by Rose and Novas (2005) to tend more to the identity politics entangled with technological transformations in healthcare, focusing particularly on the movement from patient to active citizen, through subscribing to and utilising medical categories. There have been a number of critiques of the term biosociality including the over-emphasis on newness, and the reduction of complex social processes to biology (Kerr, 2004; Plows & Boddington, 2006; Raman & Tutton, 2010).

While we do not have room in this short article to either tease apart the evolution of the term biosociality or its critiques, we position the term autobiography as an alternative way of considering the stories told around engagements with new healthcare technologies. In doing so, we acknowledge that these are not necessarily new stories, but rather stories told about new technologies, whether they be the home pregnancy tests that emerged in the late 1970s,

genetic testing and quantified self activities in the last decade, or the future stories yet to be told about microbiome testing and other promised, imagined and yet to be conceived technologies. We also highlight, in our work on autobiologies, the context for storytelling, which attends to the sociality as well as the biology, including the technologies used to tell stories.

In this article we develop the term autobiography through several examples, examining its possibilities and limitations. We first focus on autobiologies we found in our research on direct-to-consumer (DTC) genetic testing, and then examine other contexts for autobiologies. We then turn to examine autobiography as an underutilised method in social science and humanities research, one which we suggest offers rich insights into different aspects of engagements with healthcare technologies. In examining the methodological possibilities of autobiography, we remain attentive to its limitations, and the specificity of the narratives which arise from such methods, as well as the kinds of users evoked. We conclude by underscoring the tensions we find inherent in autobiologies between 1) the forms of playfulness in the storytelling, and the creative ways in which individuals experiment with the biological in sense-making and engagements with technologies; and 2) the commercial logics of this storytelling, about products for sale, with data accumulated for the benefit of large corporations, collected through the free labour of individuals' engagements with the technology (Harris, Wyatt & Kelly, 2013).

2. Autobiologies about genetics

Genetic testing is a practice which until recently was confined to the clinic. Individuals or families with suspected or known family histories of disease would visit hospitals or other clinical spaces in order to learn of their probabilities of predispositions to disease. Since the beginning of the 21st century DTC genetic testing has emerged as part of what is now a thriving personal genomics marketplace. DTC genetic testing means that the internet becomes the primary medium through which the tests are advertised, sold, shared and discussed. Nowadays online genetic testing services are increasingly being offered to consumers who are becoming exposed to, and knowledgeable about, new kinds of genetic technologies. Online genetic testing has captured the interests and imaginations of a small but growing group of people, first predominantly in the United States, and as the market expands, also in the United Kingdom, Australia, Canada and other countries around the world. By engaging in online genetic testing, individuals can not only find out their predispositions to illnesses but also find relatives, discover aspects of their ancestry, share their results with strangers, sign up for personal DNA-based musical scores, and take part in research.

We considered the convergence of genetic technologies and the internet as opening up new possibilities for people to engage with their health, and new spatial-temporal relations among patients/consumers, healthcare professionals, and creators and holders of biological information (public or private, industry or otherwise). In our own research on DTC genetic testing we examined how and if new spatial-temporal relationships were made possible, how they were being framed, represented and understood, and how we could study them. Storytelling, as we introduced earlier, seemed an important way in which to learn more about these contexts. We wondered what kinds of stories are told when a traditionally clinical practice (genetic testing) is taken into new spaces (the internet).

To find these stories we first turned to the popular scientific literature, to magazines and newspapers and other places in which high-profile genetic testers, whom we call “celebrities”, documented accounts of using DTC genetic testing. We examined for example the work of Danish journalist Lone Frank (2011), who has written about her experiences of undergoing online genetic testing in *My Beautiful Genome: Exposing Our Genetic Future, One Quirk at a Time*. The book is an autobiographical account of Lone Frank’s search for information about her genetic past, present, and future. In order to find out more about her genetic identity, Lone Frank goes to great lengths to be tested. She undergoes genome sequencing and personality tests at a university hospital. She is tested by the Icelandic genetic testing company *deCODEme*, mining her raw data from this company for genetic associations she finds in the scientific literature. She has blood tests as part of a pharmaceutical company research project, takes an ancestry test, a breast cancer gene test, a free test from the DTC genetic testing company *23andMe*, and, for good measure, a genetic romantic compatibility test. As the story unfolds, we learn about Lone Frank at the molecular level. Her autobiography is concerned with exploring human beings as organisms, but when she talks of this, she does not refer here to an individual living in a rich social environment as an anthropologist or geographer might, but rather to the “microscopic processes unfolding” within us (Frank, 2011, p. 5). The biological is central to her biography.

Stories like Lone Frank’s documenting the process of undergoing genetic testing are now being joined by other accounts; stories told by users with different kinds of public profiles, who may not be nationally or internationally renowned because of their jobs but rather develop their presence online in other ways. We call this group “non-celebrity” users. We became interested in these non-celebrity users who were posting their stories of online genetic testing online, including the ways in which internet technologies were further becoming entangled into the online genetic testing practices. We studied in particular the stories they posted on the video-sharing website *YouTube*. When we searched for these videos, in 2012, we found 20 videos of genetic testing users posting about their experiences related to testing for disease, although

this number has increased in the past few years and there are also many videos documenting experiences of ancestry testing. When we examined the videos, we found three kinds of stories: documentation of the process of taking the test, particularly spitting in the tube; documentation of the process of reading the results, often with the online results visible; and finally documentation in a video diary about the experience overall, of engaging in genetic testing.

Our analysis of these videos revealed a form of storytelling very similar to that of Lone Frank's where users were narrating a sense of self-making through biology; that is, they were telling autobiologies. In the spitting videos for example, we found testers engaging in forms of biological practice that were portrayed as scientific experimentation. In the interpretation of results videos, testers would weave their own understandings of biological inheritance into the stories, through family tales and experiences of illness and disease. These were stories told at the molecular level, stories which concerned genetic markers, alleles and ribonucleic acids, as well as interwoven family histories, which thread like wayfaring lines (Ingold, 2007) through the narrative compositions. The format for telling these stories was important too. The *YouTube* stories were digital narratives, told, uploaded, shared and discussed through the internet, via webcams (Miller & Sinanan, 2013) and other devices. These new spaces for storytelling lend themselves to new configurations for self-expression that encompass images, sounds, hyperlinks, text in the form of comments and replies, and other online features.

The autobiologies we studied published in books and online exhibited a sense of playfulness, and fleeting engagements with health and illness. These stories were part of a bricolage of sense-making and experimentation, one of many other stories told about the genetic testers' lives. The stories were told for the individuals and to share with their imagined audiences (Marwick & boyd, 2011). In the process, the stories are also doing work for the genetic testing companies, as forms of promotion or advertising, through the ways in which users bought and consumed a product, through their clinical labour (Mitchell & Waldby, 2010) in doing the test (which creates a valuable database for the companies, not only of spit and genetic information, but all of the other information provided through comments, survey responses and other online activity). We argue therefore, that it is important to consider the playful nature of autobiologies, as well as the ways in which new arrangements are formed for consumerist practices and various kinds of free labour.

3. Autobiologies in other contexts

Autobiologies are not an entirely new way of telling stories about self, healthcare and technology but they may be becoming increasingly ubiquitous. Biological self-testing and monitoring technologies in previous eras also gave rise to narratives that interwove biography with information gained about one's biological being, gleaned from some self-administered technological objects. There are a number of previous examples of this process from which we gain insight; for example, the home pregnancy test. Prior to the marketing of this technology, a "private little revolution" (Leavitt, 2006, p. 317), women relied on "natural signs" and confirmation by a doctor to determine if they were pregnant. With the home pregnancy test, this discovery has become a private, deeply personal process. Even if the result may lead a woman to a healthcare setting eventually, the discovery occurs at home. Respondents to a US National Institute of Health survey in 2003 have told their stories about this personal biological discovery via engagement with home-based testing technology. One respondent wrote "I wish I had saved the wand, as the first memento of my son" (Leavitt, 2006, p. 333). Another wrote, "I was... seeing a guy my parents strongly disapproved of". The couple had to meet at a restaurant to use the test they bought at the "99 cent store" because they couldn't use it at home, and the positive result gave her a shock, although she gave birth to a girl (Leavitt, 2006, p. 335). In these examples, women weave experiences with the biological and technological artefact into their biographical stories, as Ingold (2007, p. 116) writes, "making their ways through the tangle of the world, wayfarers grow into its fabric and contribute through their movements to its ever-evolving weave".

In these stories, biological self-discovery as well as the technology itself is interwoven with personal biography. One can now go online to view *YouTube* videos women have posted of themselves using home pregnancy tests; telling remarkable stories about how they use and interpret the technology, interwoven with biographical detail, as well as recording moments of discovery. Autobiologies occur widely across the cultural landscapes of (at least) highly industrialised societies, with an increasing presence of devices allowing us to monitor our biological selves (e.g., blood sugar, heart rate, blood pressure) and to weave this "data" into our personal narratives. The quantified-self movement, so named by its guru Gary Wolf in an article in *Wired* magazine (Wolf, 2009), involves the use of self-tracking devices that create data about details such as one's sleep patterns, exercise, food and drink input and output, mood, and an ever-expanding array of data about one's own organism, with the motto "self-knowledge through numbers" (Wolf, 2009). Self-tracking devices producing personalised data are framed as giving us powerful insight into our true selves, as well as being a means via "feedback loops" of altering and optimising those selves. It is possible to create and inhabit an

ongoing autobiography, narrating every daily ebb and flow, peak and trough, of our biological being. A wearable platform for monitoring physical activity is the *Nike+*, a shoe *cum* window into the workings of body and self (see McClusky, 2009).

The possibilities of autobiography continue to expand with the creativity of platform producers. "Life logging" has become a cultural trope, a form of self-narrative (told not only to selves but to aggregated others, some of whom track with you, compare and respond). According to Lupton:

As part of these processes, self-trackers interpret 'the numbers' they produce on themselves in certain ways based on how they want the numbers to represent them or underlying assumptions about what they mean. In interpreting their data, self-trackers often negotiate the meanings of what the haptic sensations of their bodies tells them about themselves and what other forms of data reveal. No form of information, whether derived from one's senses or from digital devices, is necessarily taken as authoritative. The skills of interpretation that are part of reflexive self-monitoring are employed in evaluating which data to trust, which to take note of (Lupton, forthcoming, p. 8).

That is, self-tracking data provide the material for interpretation in the storytelling context of one's life.

The possibilities of autobiography expand also with understandings of the human organism associated with changing directions of the life sciences, from neuroscience and its performative imaging, to personal "biome" testing (that is, the para-selves of non-human micro-organisms that inhabit the human body, and tell "stories" about where and how a particular body, or self, has lived, eaten, drunk, washed, exercised, slept). The company *Ubiome*, for example, explicitly offers the opportunity to compare oneself with others "like us" in the sense of having a similar microbiome, via a personal microbiome testing service, not unlike the DTC genetic testing companies, although the biological sampling process is different. The personal bio-sensing device market is growing, we are told, in combination with personal mobile devices and their platforms. Will autobiologies grow with it?

4. Autobiology as a research method

So far in this article, we have looked at a number of different ways in which people have used what were once or are currently novel and emerging medical devices or tests to make sense of particular moments in their lives, or of their health more generally. Some of these are now taken for granted, at least in many European and North American countries. Pregnancy testing kits can be easily bought over the counter, giving women and their loved ones, or not so loved ones, access to results more quickly, and obviating the need for clinical intervention at an early stage of pregnancy. Others are still finding their place, figuratively and literally, and it remains to be seen how far genetic testing and self-tracking will become incorporated into everyday life. Even if they do become widely diffused, it is unclear which of the many possibilities currently on offer may become most prevalent.

In this section, our focus shifts from how developments in medical research may be taken up by people attempting to make sense of their bodies, to how people's autobiologies and accounts of their experiences with such devices and interventions could be taken up as a source and method for researchers interested in health and illness, both broadly defined. Self-experimentation in science is not a new phenomenon. Medical professionals have long experimented on themselves, in order to understand the inner workings of the body or reactions to drugs and other substances. For example, the Nobel prize-winning physician, Werner Theodor Otto Forßmann, developed a cardiac catheterisation procedure, and experimented on himself in the process (Wikipedia, 2015). More recently, in his 2005 Nobel acceptance speech, Barry Marshall (Nobel Media, 2005) described how he drank *H. pylori* in order to see if bacteria could live in the acid environment of the human stomach.

Earlier, we presented Lone Frank's "celebrity" account of genetic testing. But just as self-experimentation in the pursuit of scientific knowledge is not new, neither are autobiographical accounts relating to the health of well-known people. Disease experiences, often life-threatening, make for better narratives in a literary sense. Even though death comes to us all, reading accounts of how people have dealt with diagnoses and treatments for cancer (Diamond, 1999; Picardie, 1998; Diski, 2015) is usually more gripping than accounts of overcoming the aches and pains of gout or arthritis. Autobiographies dealing with mental health are also powerful means for understanding conditions which afflict many people. One of the most famous examples is *The Bell Jar* by Sylvia Plath (1963) (originally published under the pseudonym of Victoria Lucas), a fictionalised account of the author's experience of depression in the US in the 1950s. More recently, Barbara Taylor (2014) has written about her long-term engagement with mental illness and the psychiatric care system in the UK. There are numerous accounts in the public domain of the physical and mental health of celebrities, such as film stars

and musicians, more often than not having a very loose relationship with the actual experiences of the people involved. But the published autobiographical accounts mentioned above were all written by professional writers, either journalists (Diamond and Picardie), historians (Taylor), or novelists and poets (Diski and Plath). With the rise of social media, such accounts are increasingly found online, both the sensationalist gossip speculating about the substances ingested by celebrities, and more serious reflections, again often by professional writers, such as Henning Mankell and Stephen Fry. Mankell, best-selling author of crime and other fiction, has chronicled his cancer diagnosis and treatment on his personal website (and re-printed in traditional newspapers) and sadly has now died. Fry, actor, comedian and writer, draws on his popularity to increase awareness of bipolar disorder across multiple media, including his memoirs (Fry, 2014), a *YouTube* video (Fry, 2011), a *BBC* documentary and via his *Twitter* account.

Just as we read Lone Frank's published memoir in order to gain insights for our research about how DTC genetic testing is being taken up, researchers always have the possibility to draw upon published autobiographies as sources, though they rarely do so. But journalism, literature, biography and autobiography have their own conventions, and researchers need to treat them with care if wanting to use them as documentary sources. Journalism, biography and autobiography are understood as at least searching for some kind of truth, although literature and poetry have their own truths, and many biographies and autobiographies are constructed as fiction.

Social scientists and historians, especially those who identify as feminists and/or socialists, have long explored the use of autobiographical methods, not least in order to give voice to those whose stories are often absent from the historical record. Personal accounts are often central to research methods such as individual and group interviews, ethnography and oral history. In earlier work, one of us (Wyatt), together with others (Henwood, Hughes, Kennedy, Miller & Wyatt, 2001), worked with the notion of "technobiography" in order to explore women's relationships with technology. In that collection, the contributors prepared autobiographical accounts of their own experiences with technologies, ranging from the very mundane such as plugs and computer games, to the more high-tech such as ante-natal screening and nuclear power. These autobiographical accounts were written explicitly to address the social relations of technology and issues of power that pervade contemporary technological societies. One of the advantages of "technobiography" and autobiographical methods more generally is that they enable the authors/researchers to deal with the complexity, intersectionality and ambivalence of experience and everyday life. Social scientists in particular have a tendency to divide up experience, into admittedly important categories such

as gender, age, ethnicity, but we live these categories simultaneously, and some are more dynamic and some are more important at particular moments in our lives than others.

In the *Cyborg Lives?* collection, contributors started from the shared assumptions that auto/biographies are always “re-presentations of the self for particular audiences at particular historical moments... [and] that stories about a past self always involve the act of constructing the past through present concerns, priorities and interests, which helps us to understand our present” (Henwood et al., 2001, p. 23). These sorts of constructions and re-presentations are also visible in the autobiologies we describe earlier in this article, but there is an interesting difference. Many of those constructing their autobiologies on *YouTube* or elsewhere are also very concerned with understanding their possible futures. In this article, we have examined how biology gets woven into people’s technobiographies. These are not an alternative to more theoretical or abstract literature, but they are a valuable complement, as they provide a way of deepening our understanding of people’s lived experience, their experimentation with new health devices and tests, and how they reflexively make sense of different sorts of input for constructing their own histories.

5. Conclusion

In this article, we have argued that “autobiology” provides a valuable counterpoint to the concept of biosociality. We have also examined possibilities for using auto/biographical methods for exploring people’s changing relationships with medical devices. With the concept of autobiologies, we attend to multiple logics involved when people encounter and use such devices, as well as how they engage with material platforms. For example, we need to consider both the playfulness *and* the capitalist logics underpinning stories, as these both, perhaps paradoxically, operate together to invite and also monetise various forms of agency *vis à vis* personal engagement with biology and technology. The concept of autobiologies is intended to capture the multiplicities of positions from which individuals tell stories entangling biology, technology, and biography and seek to make sense of them. Personal biology products are more than merely biomedical in the relationships they entangle, as they operate at the intersection of digital technologies, personal consumption and collective knowledge production. As such, they open spaces outside the merely clinical for social relationships around identity, sociality, economics, and the politics of knowledge. Thus, autobiographical accounts that reflect on people’s engagements with medical devices and tests provide valuable sources for

researchers, whether researchers write them, find them, or somehow engage with research subjects to prepare them.

The biosocial landscape is strewn with an ever-growing array of products that invite engagement - the production of data about the biological self, as well as narratives incorporating that data into biographies. We have pointed out that these are not entirely new, that previous technologies that reveal information about one's biology, such as pregnancy tests, might be best understood through the stories people tell about their engagement with them. There are multiple modalities though which biological self-data are being accumulated, analysed and commercialised, and these possibilities are proliferating. We have discussed how data production, and, importantly, contextualisation and meaning-making in autobiologies are also performed as "free labour" (spitting or sweating, wearing devices, logging into apps, blogging, creating autobiologies, etc.) From this perspective, and looking back to previous personal biomedical technologies, autobiologies take on significance in the ways in which they make data meaningful, through contextualising data within the biographies of their production. As we make our biotechnical entanglements meaningful for ourselves, we also make them meaningful for others, including those who analyse them. Autobiologies "add value" to data as well as point to the social relations (e.g., power, gender, class, geography) within which technologies, and biologies, are entangled, as "technobiographies" and "autobiologies" remind us. Autobiologies draw from and contribute to the world of healthcare technologies, and attending to how these stories are told provides rich insight into people's lived experience of these technologies and their possible futures.

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Prior presentations and related publications:

We first mentioned the concept of autobiography in a book review and then subsequently in an article for *New Genetics and Society*. The concept of technography was first developed in *Cyborg Lives? Women's Technobiographies*. While informed by this previous work (references below), this article is entirely original and has not been previously published elsewhere.

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