

Online self-expression and experimentation as 'reflectivism': using text analytics to examine the participatory forum Hello Sunday Morning

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Abstract

Hello Sunday Morning (HSM) is an online health promotion organisation that began in 2009. HSM asks participants to stop consuming alcohol for a period of time, set a goal, and document their progress on a personal blog. HSM is a unique health intervention for three interrelated reasons: (1) it was generated outside a clinical setting, (2) it uses new media technologies to create structured forms of participation in an iterative and open-ended way, and (3) participants generate a written record of their progress along with demographic, behavioural and engagement data. This article presents a text analysis of the blog posts of HSM participants using the software program Leximancer. Analysis of blogs illustrates how participants' expressions change over time. In the first month participants tended to set goals, describe their current drinking practices in individual and cultural terms, express hopes and anxieties and report on early efforts to change. After month 1, participants continued to report on efforts to change and associated challenges and reflect on their place as individuals in a drinking culture. In addition to this, participants evaluated their efforts to change, and presented their 'findings' and 'theorised' them to provide advice for others. We contextualise this text analysis with

respect to HSM's development of more structured forms of online participation. We offer a critical appraisal of the value of text analytics in the development of online health interventions.

Keywords

Alcohol, self-experimentation, online health interventions, social media, participation

Background

Hello Sunday Morning (HSM) began in 2009 when Chris Raine, a young advertising creative, founded a blog that documented a year he spent not drinking. His blog articulated his perceptions of how problematic alcohol consumption arose through a combination of individual choices and cultural forces. Raine began to invite his peers to join him in a period of abstinence from alcohol. Participants would stop drinking for a period of time, set themselves a goal and blog about their progress. Together, early HSM bloggers established a discursive and open-ended form of participation. They negotiated with each other to establish the practices that would come to define HSM. The name 'Hello Sunday Morning' alludes to the reward of saying 'hello' to Sunday mornings previously missed with a hangover and represents a positive commitment to taking on new challenges. Today, HSM is a social and mobile media organisation with over 40,000 participants and 'Hello Sunday Morning' is a recognisable lifestyle brand for young Australians and on media platforms like Facebook and Instagram.

The first wave of HSM participants interacted directly with each other. Early bloggers deliberated over how long they should go without alcohol, whether 'slipping up' and having a drink meant they had to start again, and whether blogging was an essential element of participation. Interviews with these early participants (Author) illustrated that blogging served several purposes: (1) a space for reflecting on and evaluating change, (2) a means to influence peers, (3) a tool for deliberating with other participants about the definition and conceptualisation of HSM, (4) an accountability mechanism, and (5) to provide advice for incoming participants.

Participants' period of abstinence constituted a self-experiment that enabled them to assess how their individual choices were influenced by larger cultural formations. As part of their formative deliberations about what HSM was and should be, the first wave of participants were reluctant to view their efforts to change only in terms of whether they drank less as a consequence of doing HSM. Instead, they sought to understand change in terms of their 'relationship' with alcohol. This fact was expressed through their blog posts and evaluated in relation to their well-being, physical fitness, and achievement of personal goals like studying, travelling, saving money or involvement in creative pursuits.

HSM as a case study in online participation

We conceptualise HSM in relation to self-expressive and self-experimental modes of participation. HSM has emerged alongside the development of more participatory and data-driven online media. Early accounts of online media by scholars, critics and activists focussed on their capacity to give ordinary people the opportunity to express themselves. These accounts have been modified by two important rejoinders. Firstly, self-expression needs to be understood in relation to how those expressions are heard and responded to (Couldry, 2010; McNamara, 2013). And secondly, self-expression needs to be understood as more than just speaking or writing, but is equally about the capacity to devise and enact experiments with our bodies, identities and moods (Lupton, 2014; Nafus and Sherman, 2014).

Participation as self-expression

The media sociologist Nick Couldry (2010) offers an authoritative account of the celebration and critique of how online participation facilitates voice. He argues that voice is a process where people acquire the capacity to give an account of their life and its conditions. That capacity to speak, however, is interdependent with the creation of social relationships and frameworks where we recognise one another and organise our social life. In reference to this work, debate has unfolded on what it is to 'be

heard' through more deliberative processes of monitoring and listening to public expression. One important response to Couldry (2010) envisions an 'architecture of listening' whereby media processes and tools enable the expressions of mass populations to be recognised, understood and responded to (McNamara, 2013). This architecture includes automated devices like text analytics.

These efforts to conceptualise online voice as a social process makes clear that participation involves not just what people say, but also the creation of technologies and devices that organise and structure how people interact. HSM has followed these impulses, initially, by using blogging as a tool for people to articulate their own identities and cultural practices around alcohol. HSM is a unique intervention for managing alcohol consumption because it emerges from a 'start up' digital design culture that has driven the development of techniques for generating and modulating online participation (Koskinen et al, 2011). The opportunities that HSM offers participants to freely express themselves are thus interrelated with HSM's efforts to iteratively develop ways to monitor, guide and channel that participation in productive ways. In other words, HSM continues to develop their own 'architecture of listening' by creating tools that collect, analyse and optimise user participation.

Participation as self-experimentation

We view self-expression as part of self-enactment inasmuch as it reflects indistinguishable discursive and bodily elements. It follows from this that these forms of self-expression that participatory media enable may support practices we identify as 'self-experimentation'. This shift of media technologies toward data-oriented modes of participation corresponds with medico-cultural phenomena of self-care, self-experimentation and the de-stabilising of expert medical knowledge (Author).

HSM has developed outside a clinical and research setting and it was not initiated explicitly as a health intervention. Indeed, HSM reflects the ambiguous and vexed construction of alcohol as a 'health' issue by reproducing the discourse that problematic alcohol consumption is produced at the nexus of health and culture. Nonetheless, in valorising self-experimentation HSM reflects broader contemporary

medico-cultural phenomena. Individuals are increasingly exposed to a plethora of health information and treatments, not least through their use of the internet (Ybarra and Suman, 2006; Thackeray, Crookston and West, 2013). This expanding marketplace, coupled with social, epistemological, political and economic changes, presents a challenge to the traditional relationship of medical power and knowledge. The inception of the 'expert patient' – a consumer who actively engages with their health professional(s) and information sources of choice in order to make healthcare decisions, has emerged in recent times (Ziebland, 2004; Prior, 2003). Contemporary informational and technological conditions create an environment that encourages individuals to take responsibility for healthcare decision-making that may encompass engagement in subjective 'testing' of potential healthcare practices (Author).

Previous studies of discussion boards and web fora have tended to focus on the epistemological dimensions of new technologies. The production of 'lay expertise' through the negotiation - both accommodating and resisting - of experiential and 'scientific' knowledge has been a key theme of analyses (Akrich, 2010). These processes have subsequently been theorised in terms of 'prosumption', where users are both producers and consumers of knowledge (Lupton, 2014). The production of 'lay expertise' resonates with the concept of self-experimentation we propose. However, it is our contention that the enactments of the self through self-experimentation, evident in HSM, differ from those that have previously been the topic of sociological analysis. It is our contention that this kind of knowledge 'prosumption', whilst evident in HSM blogging, is an unintended consequence – a by-product – with respect to HSM's main aim. We suggest, instead, that the primary purpose of blogging in HSM, in this context, is as a means for facilitating action and reflection – at both individual and collective levels. As such, HSM, somewhat uniquely, facilitates a community that is action-based rather than information-based.

We conceptualise HSM not primarily as a forum where individuals produce and circulate 'lay expertise', but rather as a series of iteratively developing devices for structuring user participation and

action, as part of a media system increasingly organised around structuring the play between subjects, bodies and machines (Schull, 2006). This perspective focusses on how a subject's capacity to express themselves is interrelated with efforts to experiment with their body and mood, and how that individual action is orchestrated within a media platform that aims to extend, intensify and modulate their action over time. To understand participation, one must pay attention to the relationship between its expressive and experimental characteristics and distinguish between situations where individuals are *listened to* rather than *watched by* media platforms. This involves differentiating between media platforms that watch in order to respond in increasingly customised ways, versus media platforms that listen in order to facilitate social relationships that all participants exercise control over (Couldry, 2010). As Schull argues, examining participation involves interrogating the relationship between self-modulation and (technological) modulation from without (Schull, 2006: 240). Analysis of online participation needs to pay careful attention to the crucial differences between the capacity to experiment with oneself, to be experimented upon, and to control the devices that are used to conduct experiments.

HSM differs from health interventions generated in a clinical or research setting, where a model of change is typically developed, subjected to experimental testing and then implemented and evaluated all within a highly regulated environment. In the latter settings an intervention is only considered ready for broad-scale implementation within a population after its efficacy has been experimentally proven. With HSM, development and evaluation occur simultaneously as part of an iterative process of development and adaptation. This process is not regulated by research protocols in the same way as clinical research is but it is transparent to the extent that innovations are made visible through changes made to the website or noticeable changes in how HSM interacts with its participants

HSM's unique history and trajectory make it a compelling case study of the interplay between participants' expressions and efforts to structure participation. HSM potentially offers a site for both theoretical and methodological advances in understanding the nature of participation and health

behaviour using social media. In this article, we develop our theoretical understanding of participation, with respect to self-expression and self-experimentation, by investigating: (1) how participants' blog posts offer a set of data for conceptualising and evaluating how participants' expressions change over time; and (2) the benefits and limitations of visual text analytics in conceptualising how online platforms structure participation and influence online health interventions in which participants produce expressive as well as behavioural, demographic and online engagement data. Significantly, our analysis is not confined to a presentation of 'results' based on visual text analytics. Over and above this, we engage in critique of HSM's own use of text analytics. Thus, our argument is not based on the results of text analytics viewed narrowly as a *theoretical* 'architecture of listening' i.e. as a method of understanding an activity in the socio-technological world. Rather, we argue that text analytics also need to be understood as a technology embedded in HSM's *performed* 'architecture of listening'. Our analysis addresses both these theoretical and performed modes of 'listening'.

Method

Conceptual Framework

This article analyses the blog posts of HSM participants in relation to the development of HSM since 2009. As part of that development we have been involved in ongoing research collaboration that includes interviews with participants, participant-observation in planning and design workshops, meetings and conversations, and analysis of demographic, textual and consumption data. Here, we use visual text analytics to evaluate how participants' expressions change over time in their blogs.

Visual text analytics offers a novel way of conceptualising change in online health interventions. Understanding how participants' expressions change may help to assess how health behaviours and the performance of identity are interrelated. Yet, participants' expressions are not a simple proxy for evaluating change. Equally, they are a unique form of self-reported data that enable organisations like

HSM to understand how participation works and respond accordingly. Both purposes deserve attention.

Sample and Data Collection

We analysed 13102 blog posts from 2590 HSM participants drawn from a sample of 13878 blog posts from 7890 registered users written between January 2009 and February 2013. A database export of all available user data and blog post data was supplied to the researchers by HSM. Each blog post was associated with the following data: date and time of first post, days since first blog post, total number of blog posts, and total number of followers.

For this paper, the analysis focusses on bloggers who posted between 3 and 22 times. These bloggers accounted for 45.29% of participants and 59.69% of blog posts. Participants who produced only 1 or 2 blog posts accounted for 51.93% of participants while the thirty most productive bloggers (1.15%) produced 17.78% of blog posts. This heavy-tail distribution is typical of online communities where a small number of people produce the majority of the content and participation falls off according to a log-normal or power law distribution (Berners-Lee, 2009; Carron-Arthur, Cunningham and Griffiths, 2014; Shirky, 2003).

We created a manual time variable which could be associated with the data in order to examine the temporal characteristics of the blogs by days since a participant's first blog post. We identified blogs posted between 0 and less than 1 month (Month 1), between 1 month and less than 2 months (Month 2), between 2 months and less than 3 months (Month 3), and 3 months or more (After month 3).

Analysis

We analysed blogs using the visual text analytic software program Leximancer (Smith, 2000; Smith and Humphreys, 2006). Leximancer uses two algorithms to identify concepts and themes (collections of similar concepts) in uploaded text: (1) The semantic algorithm creates sets of terms based on word frequency and co-occurrence of these terms within a sentence or a small number of sentences. That

is, the algorithm counts how frequently words occur together and apart, and creates individual collections of terms that constitute a 'concept'; (2) The relational algorithm then 'simulates force between the concepts' to generate a 2D visual map of the input data which visualises concept frequency, connectedness, and co-occurrence. The map is interactive, allowing researchers to access text excerpts associated with concepts in order to qualitatively examine the expressions from individual participants that are grouped together as related concepts.

Leximancer also provides for the concepts it identifies within the text to be correlated with demographic variables, data on site interactions and user generated categories e.g. 'timing of blog posts' (Month 1, Month 2, Month 3, and after Month 3). This feature allowed us to examine the prominence of particular concepts in time.

Since the distribution of blog posts and followership behaved according to a log-normal distribution we used a logarithmic binning strategy to create discrete groupings of users (Milojevic, 2010). Initially, we aimed to create 10 bins but we found that 4 groups provided the most parsimonious representation of bloggers. The characteristics of these groups were as follows:

- Group 1 - 477 participants producing 3-4 posts each. 18.31% of all bloggers producing 12.18% of the content.
- Group 2 - 340 participants producing 5-7 posts each. 13.05% of the cohort producing 14.94% of the content.
- Group 3 - 234 participants producing 8 to 12 posts each. 8.98% of the cohort producing 17.34% of the content.
- Group 4 - 129 participants producing 13-22 posts each. 4.95% of the cohort producing 15.53% of the content.

The findings presented here are based on an analysis of participants' data separated into groups according to the number of blog posts they produced to assess whether there were differences in thematic content or progression in participants who blogged more or less often. The analysis

demonstrated that the thematic content and its progression over time followed a similar structure regardless of how many times participants' blogged.

Results

Leximancer generated a visual map plotting all the concepts identified by its algorithms in spatial relation to one another (Figure 1). We labelled categories relating to months 1, 2, 3 and after for each of the four cohorts (3-4 posts, 5-7 posts, 8-12 posts and 13-22 posts). These categories are depicted on Figure 1 as: Month 1 (3-4 posts), Month 1 (5-7 posts) and so on.

Leximancer identified concepts (identified as words in Figure 1) for blog posts written in the first month and clustered these toward the right-hand side of the map. Leximancer identified concepts for blog posts written after month 1 and clustered these toward the left-hand side of the map. We drew in a line between the concepts associated with month 1 and concepts associated with blog posts produced after the first month. As the figure shows, the blog posts indicate a shift in thematic content between month 1 and subsequent months.

FIGURE 1: Leximancer map of HSM blog posts.

Excerpt A (posted in month 1, participant posted 3-4 times, associated with the concept of 'weekend'):

I happened upon an interesting quote a couple of weeks ago, and it's been since starting my HSM that it keeps reverberating in the background of my mind. 'Character is who you are when no-one's watching'. For me, this created a sort of awakening and a new resolve. I had often thought of 'character' as how we represent ourselves to and for others. Which (truth be told) made it very easy for me to opt out, to not succeed or to commit half heartedly, seeing that I was doing or being based on 'others'. All too often we place more value on what others think of us, or expect from us. I'm learning that character is deeper than that. So, who am I when no-one's watching? What is it that I am seeking to achieve or be? Why is it important to me to succeed?

Today is day 10 for me, of no alcohol. I survived my first weekend. Without grog! And I woke up each morning of the weekend with this amazing energy. It felt really good to get out and enjoy my weekend without the horrid fogginess of a hangover! I even went to the gym and trained for a couple of hours first thing Saturday morning (and that never happens!!!).

That's not to say I didn't have temptations and challenges during the week. I finished up a contract at work this week, and the obligatory drinks were provided on Thursday night. As tempted as I was for a lovely glass of wine with my colleagues, I stood firm and chose mineral water. There were a few feeble attempts at persuading me to have 'just one glass'. But I remembered the quote about character. It's interesting how strong your resolve becomes when you stand by that commitment you made to yourself. This HSM journey is not about or for anyone else. I am doing this for me.

In excerpt A the participant assigns a set of value judgements to who they are as an 'individual' and to the social-environment. Individual 'character' becomes associated with health, while social-environment becomes associated with toxicity. The post indicates an important change in perspective

on how one might spend their leisure time and the blogger's evolving sense that feeling well and exercising is more valuable than drinking.

Participants frequently reported on their efforts to negotiate social contexts involving alcohol consumption during their HSM. The 'bar', an important space for drinking rituals, emerged as a frequently cited concept. In excerpt B (posted in month 1, participant posted 5-7 times, post associated with the concept 'bar') a participant writes on a Friday afternoon:

My Lord am I ready for a beer. Just a cool, crisp beer to relax me post work. I've really earned it – have worked like a Trojan this week. ...right now, after a tough week, in a state of post-anxiety, I would love to go out, quench my thirst, dull my brain, socialise with random people, get a little loose and – in typical style – be super awesome at pool.

The participant expresses the affective nature of alcohol consumption and, similarly to the previous participant, its interconnectedness with both how they feel and social norms in their workplace. This excerpt also hints at the participant's awareness that their consumption of alcohol may constitute a form of self-medication, in response to the stresses and strains of their job.

In excerpt C (posted in month 1, participant posted 5-7 times, post associated with the concept 'bar') an undergraduate student writes:

I just got a job in a bar. I'm in my first year of university. ... Being a 20 year old, first-year university student I'm very much aware that its weird not to drink. Last semester I think I consumed more alcohol than water, drinking to get drunk at the very LEAST twice a week. I don't even know what alcohol is doing to my body at the moment. This is a COMPLETE experiment for me; I could love it, or hate it, but either way it will be an experience. I want to know, if I don't drink, will I be healthier? Will I lose weight? Will I be more or less stressed? Will I get better grades? Will I miss alcohol? It'll be interesting to see if there is a difference. The experiment has begun. What kind of person am I without alcohol?

The participant expresses their effort to step outside the norms of their social world as an 'experiment' that generates questions and uncertainty.

In excerpts A, B and C we see participants reflecting on their sense of identity in relation to the role alcohol has played in their life. In the excerpts, participants each report on the negotiation and anticipation of social contexts where drinking is a social norm. Some bloggers also reported difficulties in month 1, including what HSM calls 'slip ups'. For instance, many bloggers wrote about colleagues, family or friends pressuring them to drink. Some reported on their successful negotiation of those challenges while others talk about their feelings of 'slipping up' and accepting a drink.

Reflecting on efforts to change after month 1

In blog posts after month 1, participants' reflections on negotiating these social contexts appear to shift toward evaluating their efforts to change, taking a critical distance from social norms, and theorising about HSM's effectiveness. There is continuity with the themes expressed in month 1, namely, reflections on the social environment and on identity. However, there are important changes to how these themes are represented. Having, it seems, received validation through HSM, participants begin to express how they are able to reclaim positive elements of their identity as not being due to their alcohol use. They describe acting positively and proactively within their social environment to resist alcohol, even in circumstances where such behaviour may be stigmatised.

In excerpt D (posted in month 2, posted 8 to 12 times, post associated with the concept 'sober') a participant writes about being sober in a bar:

In the spirit of Hello Sunday Morning, I've been maintaining my usual (fairly hectic) social life which generally involves being out and about quite frequently and meeting lots of new people. I've been surprised at how well I can manage in bars and pubs without a glass of vino clutched in front of me like some sort of weapon, and have been even more surprised to find out that my habit of starting animated conversations with random strangers was not (as I had thought) booze induced, but actually who I am.

In theory this means I should be 'picking up' eligible young bachelors left, right and centre with my newfound level - headedness and hot little body, all thanks to not drinking, but strangely enough it seems to be the opposite! Now I'm pretty sure this isn't because not drinking has made me unbearably boring (as I'd feared) because I'm still meeting a lot of new men. The scary thing is as soon as they offer me a drink and I reveal that the cocktail I've been sipping on is really a mocktail they suddenly have to go wash their hair...ouch!

Hmmm, I guess picking up someone who is sober could be pretty scary, and I guess these guys are doing me a favour by signalling their lack of confidence/social skills/ backbone. I guess I just need to find where the nice single guys who aren't scared of sobriety hang out at the weekend...

Excerpt D illustrates a participant acting positively and proactively within their social environment to resist alcohol, even in circumstances where such behaviour may be stigmatised. Unlike the excerpts from month 1, the participant no longer appears to be 'struggling' to resist the pressure to consume alcohol.

In Excerpt E (posted after month 3, participant posted 8-12 times, post associated with the concept 'year') a participant writes:

Over the past two months I've come to realise that abstaining, not attempting moderation, was definitely the right decision for me.

...

Taking a big chunk of time off has given me the skills to know I can have a great, productive time without drinking. I'm also thinking about how I might want to drink when I finish my HSM. But what I'm getting most out of my period of sobriety are lots of awesome 'lightbulb' moments about how and why I drink, that I don't think I would get if I was attempting to drink in moderation. Space is needed for quality reflections, I think... more on my reflections soon.

Here, the period of HSM is almost likened to a spiritual retreat that allows one to reflect on their reasons for drinking. Like the previous blogger, this participant finds that the period without alcohol was a validating experience. In general, blogs conveyed that participants did not attribute drinking to a sense that they lacked self-worth. Rather, blogs indicated that participants' lacked confidence in their ability to enjoy life without alcohol. Here, HSM provided them an opportunity to test and dispel this belief, and for participants to recover confidence in their ability to have fun without alcohol.

In excerpt F (posted after month 3, participant posted 3-4 times, post associated with the concept 'life') a participant provides a list of 'findings' from their HSM 'journey'. Listing reasons for attempting HSM, goals to achieve during a HSM, or providing a summary of 'findings' at the conclusion of a HSM was common in blog posts. It is consistent with the idea of HSM as a form of self-experimentation and self-validation. The five 'findings' that the participant F reported were:

#1 - I will dance and carry on to embarrass myself with or without alcohol. Its my nature and I'm fine with that.

#2 - My bank balance thanks me eternally for having a three month break from boozing. So much so if for no other reason than to set a goal (incredibly expensive sleeve tattoo) to save for, then a HSM is a good idea.

#3 - Drinking amplifies your emotions and they can run your life if you don't get a break. This is more of an observation I've made of others around me. If something's a bit rubbish in your life you can't seem to control, my advice would be cut the booze. Even just for a few weeks. It mitigates the night time craziness and the morning after self loathing.

#4 - 1x Dad with cancer, 1x Dad beating cancer, 1x goodbye party, 1x wedding, 1x welcome home party, 2x birthdays (one of my own), and countless Friday afternoon drink sessions were interesting experiences sans alcohol.

#5 - Having a spontaneous Tuesday night party with the siren-esque Finnish boarders (I'm looking at you, Jenna Mayhem and Anna Anarchy!!!) staying with Christ and I at Fernberg Haus (who were awesome fun) was an incredibly silly way to finish my HSM. Not really, it was totally awesome but rocking up to work with two hours sleep and probably still drunk

and spending the first 3 hours of the day whiteboarding with the boss (now known as waterboarding) was the most painful experience of my life.

In excerpt D the participant takes a critical view of a social context where drinking is the norm. Participant D positions themselves in relation to those norms, and makes a favourable assessment of their own confidence in comparison to others in the bar. In excerpts E and F the participants' present 'findings' and interpret them for readers, offering them as advice to others who are undertaking or embarking on a HSM. During these months bloggers reflections often expanded beyond concern with the self and one's immediate environ to engage with larger familial, social and political issues to do with alcohol. Participants would consider the way social life and alcohol are entangled, others would draw critical attention to the promotional efforts of the alcohol industry, and still others would reflect on how their relationships with family and friends had changed since embarking on HSM. Some reported that relationships had improved, while others reflected on the friction and distance from friends their efforts to change had caused. HSM blogs are a space where participants position individual change within larger social and cultural contexts.

For example, in excerpt G (posted after month 1, participant posted 12 times associated with the concept 'sober') a participant's reflection on their relationship with their niece and daughter prompts them to consider the role the alcohol industry plays in constructing drinking culture, specifically how their own familial relationships are shaped by the power of the alcohol industry. Reflecting on a conversation with their niece about a family member, whose alcohol consumption they are concerned about, the participant writes:

When I was young everyone smoked - even my parents who didn't smoke always had cigarettes in the house to offer guests, to be 'social'. Every single public place was full of smoke, restaurants, cinemas, offices, bars, pubs, libraries, trains, the London Tube, college campus', we could even smoke in Y12 in our own common room as long as the majority voted for it. It's hard to imagine now, and it would have been inconceivable for anyone in

the 60s, 70s and 80s to imagine the world we live in today with all the restrictions on where you can smoke, the negative advertising, standing outside in the cold etc. It made me wonder whether in my daughter's lifetime alcohol will shift away from being everyone's best friend to public enemy number one? It makes you think doesn't it? Really the alcohol industry is a lot like the tobacco industry, sponsoring sporting events, all pervasive and now the tobacco industry's once mighty empire is tottering, they are becoming pariahs. The social effects of our drinking culture are huge, maybe Hello Sunday Morning is just the start of a change, a zephyr at the moment, but who knows? Maybe that gentle whisper will grow into a wind that will change society's attitude towards alcohol's place in our culture.

My aim once I've finished my HSM is to only drink occasionally. My daughter says it's much nicer with me not drinking. She told me that I don't get as cross and I listen more, quite a wake up call, talk about feeling bad. If I find I can't drink moderately I think I will simply have to stop altogether. I am truly enjoying this liberty, this freedom. I really don't want to go back to waking up feeling crappy, tired, groggy, piling on the pounds for what?

Discussion

Modes of expression

HSM evolved as an innovative social movement come health intervention because participants record their efforts to change in creative, unstructured, and reflective written expression. In month 1 participants tended to set goals, describe their current drinking practices in individual and cultural terms, express hopes and anxieties and report on early efforts to change. After month 1 participants continued to report on efforts to change and associated challenges and reflect on their place as individuals in a drinking culture. In addition to this, however, participants evaluated their efforts to change, and presented their 'findings' and 'theorised' them to provide advice for others.

Two modes of discourse are evident on the blogs: (1) a reflective mode where participants position their individual drinking practices in relation to their identity, social setting and broader culture, and

(2) an evaluative mode where participants report on and assess their efforts to change. Reflective writing serves the role of examining and shifting one's identity – how we understand ourselves and our lives in relation to the social world. Evaluative writing works as a mechanism for recording and assessing efforts to change. Both practices fit within a contemporary medico-cultural paradigm of 'self-experimentation'; they enable change to be made visible and understandable, and make participants accountable to themselves for their set goals.

HSM bloggers' focus on recovery of the 'authentic' self by de-centring alcohol in the narrative construction of one's self is somewhat unique. Other online sites, where participants blog about efforts to change health behaviours, routinely organise identity construction around those behaviours being addressed. For example, Leggatt-Cook and Chamberlain (2012) highlight how obesity blogs are given names like 'pastaqueen' and 'annieshrinkinggirl'. By virtue of continuing to blog about obesity on a blog named for it, these writers can never reconstitute an online narrative where eating, or weight, is not definitional of who they are. Participating on HSM, however, does not commit the blogger to an identity that must revolve around accommodating or resisting alcohol; instead, HSM bloggers contribute to a blog named after an aspiration that is not about alcohol.

Developing the capacity to structure participation

Participants do not just represent and experiment with themselves via blogging, they also knowingly contribute to the creation of a social network and media platform that evolves over time. Individual participation generates attention and data that HSM use to purposefully develop ongoing modes of interaction. This information is then served to them in evolving visualisations and recorded for evaluation purposes. While visual text analytics have limited capacity to evaluate the extent of change to participants' drinking behaviour, it is a useful tool for conceptualising how people participate. The thematic content of participant's blogs is a record of how their expressions change, what they did, and what they thought about. For designers of online interventions, analysis of textual data thus enables the design of more structured forms of participation because it reveals how participants do what they

do. For instance, because text analytics revealed that the thematic content of blogs changed in a predictable way throughout a HSM, HSM responded by developing an algorithm within their platform that sorted blog posts so that participants saw posts by users at a similar stage of the program; the algorithm could reproduce the narrative that text analytics identified. Furthermore, practices that bloggers inductively generated on their blogs could be turned into structured activities. For example, participants qualitatively expressed goals in blog posts, and so HSM responded by identifying and defining common goals. In turn, selecting standardised goals functions to generate useful data and enables participants with shared goals to connect with each other and so the process of listening and responding evolves over time.

This developmental trajectory is distinct from other approaches to helping people with substance misuse problems in the e-health space. Those that have emerged from within a research setting seek to prevent, substitute for, or augment, face-to-face therapies by providing brief interventions and advice on cutting down or stopping (e.g. drinksmeter, CHESS (Gustafson et al., 2011)). HSM differs in not assuming that participants' are in need of 'treatment'. HSM also differs from self-help groups such as Alcoholics Anonymous, in terms of how it influences identity development. While AA facilitates a participant's realisation and acquisition of an identity as an 'alcoholic' in need of recovery (Cain, 1991), HSM specifically does the opposite. HSM emphasises abstinence as a form of self-experimentation and as a temporary space for reflection on one's relationship with alcohol. As we have described already, this enables participants to see how their choices and sense of self are influenced by wider cultural norms. It also assists participants to develop alternative, non-alcohol involved identities. The sociotechnological practice of group blogging to a collective site entitled "Hello Sunday Morning" supports a process which undermines the entwinement of alcohol with one's identity because HSM bloggers contribute to a blog that is named for an aspiration that is independent of alcohol. This differs from the contributions one might make to an expressly labelled health behaviour blog (Leggatt-Cook and Chamberlain, 2012), where the individual remains inextricably tied to an identity that can only

(shamefully) accommodate or (profoundly) resist one's issues with food but never reconstitute an identity independently of it.

Expression and experimentation as 'reflectivism'

HSM have increasingly engaged with researchers and health professionals to incorporate 'evidence-based' insights and practices into their development. However, HSM's mode of development remains consistent with the start-up, creative industries and design culture from which they emerged. These modes of cultural, media and software production are characterised by open-ended design methodologies that involve continuous incremental development of devices for managing participation. Consistent with such approaches, the modes of participation generated inductively on the blogs are an incubator for practices that can be designed into structured and data-generating modes of participation. Participants' voices and HSM's platform modify one another in this iterative process. Viewed as part of this process, text analysis of the blogs does not only evaluate health behaviour change, it enables new behavioural possibilities as designers monitor and understand participation, and then respond as part of an ongoing process of design and innovation (Koskinen et al., 2011; Nafus and Sherman, 2014).

Blogging enables participants to document and reflect on their efforts to change, influence one another, and understand HSM as a set of practices. This content also provides data that HSM can use to understand what participants do and how they change. Over time, as HSM has grown and its focus evolved, these data have changed in character from being exclusively discursive open-ended blogs, to include a collection of pre-operationalised datum. For us, these data and the changing processes of its collection, provide a rich 'naturally occurring' dataset from which to understand the nature of participation in online communities, and the possibilities and limitations of using web-based organisations such as HSM to achieve cultural change. Architectures of listening (McNamara, 2013) are interrelated with the effort to create more tailored and customised forms of online participation. As such, we might refer to them as architectures of sensing and responding in which online platforms

enrol participants in the collection and application of data about themselves. These data are used both to evaluate activity on the platform and to present customised self-representations to participants. Consequently, accounts of 'prosumption' as the expression of 'lay expertise' in debates about online health are of limited relevance in understanding HSM because HSM and its bloggers are not wed to, or reacting against, any particular epistemology – lay or biomedical. Instead, HSM bloggers document the outcomes of a process of activism and reflection that we term 'reflectivism'.

The nature of self-expression that arises through the sociotechnology of this social media platform also enables the reproduction of distinctive self-understanding. Previous studies on blogging have found that responsabilising and individualistic discourses of accountability, blame and shame are a prominent theme in blogs on health behaviour change (Legatt-Cook and Chamberlain 2012). However, while these discourses are present in some HSM blogs, they are neither a prominent nor systematically reproduced set of themes. Rather, the focus of 'reflectivism' enables the individual to become attuned to how alcohol consumption is produced within an enabling environment.

HSM may be more similar to the experimental forms of participation associated with self-quantification (Nafus and Sherman 2014). The forms of participation HSM offer – setting goals, undertaking self-experiments, and evaluating and judging progress toward goals – reflects the practices of the 'quantified self' movement (Nafus and Sherman 2014). The 'quantified self' collects and analyses data, in a disciplined and experimental way, in order to track and evaluate changes in their physiology, mood, movements, and so on. Importantly, though, HSM formalises the interplay between discursive and data-oriented modes of collective online participation. While more structured forms of participation are associated with the emergence of quantified ways of representing and understanding our bodies, HSM is distinctive in accompanying these experiments with open-ended discursive reflections. Self-quantification may have reflective and performative dimensions (Nafus and Sherman 2014), but HSM is unique because participants are always enacting the presentation of data

about their experience while also reflectively narrating on that experience for others in the community.

Conclusions

HSM's trajectory illustrates how monitoring open-ended forms of participation is interrelated with designing and evaluating more structured forms of participation. Text analytics has been one tool used in assessing and structuring participation on the site. HSM does not fit neatly into existing accounts of blogging or self-quantification in online health interventions. HSM participants are engaged instead in a process of 'reflectivism' – a dedicated process of reflecting on their actions. Reflectivism accounts for a situation where individuals experiment by acting and expressing their observations as thoughts and data on media platforms that then experiment with them. Reflectivism draws attention to both the interplay between self-expression and self-experimentation at the individual level, as well as the way that those actions and reflections are harnessed and used to modulate participation at the platform level. Paying attention to the interdependent manoeuvring of individuals and platforms is necessary in order to account for how our efforts to care for ourselves using participatory technologies are embedded within media platforms that aim to modulate our identities and bodies. The critical question that arises from this material is: do individual efforts to express oneself, as discourse and data, grant more or less control over selfhood?

Strengths and Limitations

At the time of the analysis, HSM had incomplete demographic and behavioural data on its participants. Future analysis could relate the blog posts to participants' demographic, engagement and alcohol consumption data.

Text analytics can identify concepts and arrange them spatially and temporally. Leximancer's analysis of the HSM blog posts illustrates how concepts are related to each other and associated with either the first month or subsequent months of a HSM. The pattern Leximancer identifies that over time

participants' blog posts tend to report on and evaluate change in addition to reflecting on drinking practices. Text analytics cannot, however, give a definitive assessment of how many individual participants adhere to the temporal sequence identified in the whole corpus of texts. Nor can it demonstrate how standardised the sequence is across the cohort. To counter this limitation we undertook analysis of variety by dividing participants based on the number of blog posts, the number of followers they had, and their location in the network. In each of these analyses the same sequence of concepts was evident.

Qualitative analysis of excerpts in relation to concepts on the map revealed interpretable patterns and practices, albeit not for the reasons that Leximancer suggested. Moreover, while Leximancer provided a means for ordering our data, we still needed to utilise classic qualitative techniques to select and interpret the large volume of sorted blog posts.

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