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Automated Diaries

Abstract: *Today's diary writes itself for you. Apps can turn your smartphone into an automated diary that will keep track of where you go, sort your photos for you and pull in your social media updates to generate detailed records of your life. Lifelogging cameras like the Narrative Clip are clipped to your shirt and automatically take a photo every 30 seconds throughout the day. This chapter discusses the information and images that these devices record and the ways in which they present the data to try to make it meaningful for the user. Are our devices 'active cognizers', to use N. Katherine Hayles' term, making us cyborg selves collaborating with our machines? How do these devices and apps filter our lives?*

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Diaries are always, in a sense, written in real time. As engaged readers or followers of online self-representations, we always crave the next post, the next image, the next bit of the story. The very act of starting a blog or an Instagram or Facebook account carries with it an intention to write or share more, again, another day. As Phillippe Lejeune writes of diaries, 'All journal writing assumes the intention to write at least one more time, an entry that will call for yet another one, and so on without end. ... To "finish" a diary means to cut it off from the future' (2001, 100–1). Social media embed this 'call for yet another one' into the software. Facebook asks 'What's on your mind?', Twitter offers me retweet buttons and a box to write my tweets in, and HeyDay and OptimizeMe push notifications to the home screen of my phone, suggesting I might want to look at my photos or update the log of my activities today.

The ultimate real-time diary is a diary that writes itself automatically, without needing your input. Smartphones are ideal devices for logging our day-to-day experiences. For a start, they automatically store information about what we are doing: a phone can log our geographic location and thus where we go and how fast we are moving from place to place, and many models can also track motions, meaning it can estimate whether we are running, climbing or dancing. Some phones sense far more than this. The 'Sensors Overview' on Android.com's pages for developers explains how to use data from platforms that have sensors for temperature, light, pressure, humidity, gravity and more. The phone not only knows whether we make phone calls or send texts or emails, but also knows which apps we use and what we search for online. It knows what version of the operating system we are using, what music we play, what videos we watch and what we read. It can measure how fast we read and the style of our writing. In the final chapter of this book, I discuss the implications of our devices' automatic tracking for privacy and surveillance, but in this chapter I explore how we are beginning to use this automatic tracking to document and explore our own lives.

We are currently seeing more and more examples of continuous, automated, real-time diaries, where our everyday use of technology is converted into a journal-like format. Location sharing was one of the first aspects of personal data to be automatically logged at the user's request, first with services such as Plazes.com, which logged you as being at a new location every time it saw that your laptop was connected from a different IP number (J.W. Rettberg 2014, 86), and later with smartphone apps such as Foursquare and Swarm that use the phone's built in GPS and

other location tracking systems to allow the user to check in at different locations. These services generate a chronological list of places that the user was at, and award ‘badges’ or similar rewards or markers showing the kinds of places users spend a lot of time at. Foursquare’s badges have titles such as Jetsetter (airports), Mall Rat (shopping malls), Trainspotter (train stations), Baker’s Dozen (bakeries) and Great Outdoors (parks and nature areas). Some of the badges are more interpretative: School Night is awarded for checking in after 3 am on a school night, and 9 to 5 is for checking in at work 15 times in 30 days.

Newer services make location-based diaries even more seamless. Why wait to check in or manually post a photo or text when the technology I carry with me can automatically track where I am and organise all my photos and texts for me? Sites such as TimeHop allow us to connect our various social media streams and add in text messages and photos sent or taken on our phones to create a timeline of our days. More recently, automatic journaling apps for our phones such as HeyDay, Saga, Chronos or Step combine information about our movements using GPS, the photos we take and connected services like Facebook, TripIt, Runkeeper and more to create automatically organised diaries of our days with little or no direct input from us.

Life poetry told by sensors

The marketing for the many lifelogging apps that are available by mid-2014 tells us of a vision of authentic, meaningful diaries created by machines for people. Saga’s slogan is ‘Choose your own adventure,’ and their website continues: ‘Be bold. Embrace your authentic self. Record your life automatically and share it effortlessly with the people you care about’ (2014). STEP journal’s iTunes App Store pitch is even more enthusiastic: ‘STEP Journal assists you in capturing and telling the amazing story of your life. Life poetry told by sensors – minimal efforts and 100% privacy. The true power of Automatic Journaling!’ Their website proclaims ‘Moments turned into meaning,’ and continues, ‘Want to know yourself better? STEP Journal makes it easy to collect your life moments and manage them using quantified and visualized dashboard. It’s a beautiful way to enrich your life’ (2014). Friday is another lifelogging app. It not only tracks what you do, but also tries to predict what you’ll want to do. The description for the app in Google Play assures potential users

that ‘Friday initiates thoughts and ideas for you, it helps you remember, it tries to anticipate actions’ (2014). Chronos Data Collector and OptimizeMe also try to help you analyse and improve your life by automatically logging it. On the Chronos website, we read ‘Find your time. See how you are spending your time without lifting a finger. Chronos runs in the background on your phone and automatically captures every moment’ (2014). The blurb for OptimizeMe reads ‘Get the best out of every day of your life. Simply track your everyday life with OptimizeMe and learn how to improve it’ (2014).

Several of these apps emphasise the *story* they promise to tell of your life in their very names: Saga, Narrato, Storica and Evertale are examples. They promise to analyse your daily movements and actions and to create meaning, help you get to know yourself better, get the best out of every day, enrich your life, improve your life – and predict what you might be interested in doing next.

I installed several of the apps on my phone and let them track me for a few weeks, curious to see how they would represent my life. OptimizeMe was not automatic at all, and it required me to spend time every day entering my activities, my energy level, productivity and mood for each entry. After two weeks it began to show me ‘correlations’, but they were not very useful. For instance, on days when I slept less, I tended to log my writing as being more productive – perhaps because I wrote less and slept more on weekends. Saga tracked my movements automatically and connected to Facebook, Runkeeper, Twitter and various other apps to generate an automatic log of my life, but I had to correct its guesses about where I was, and its promised helpful information that would be relevant to my individual life mostly consisted of repeated notifications about concerts at the local grocery store. I had one happy moment with Saga’s personalised information the day after I installed it. When I was exploring the hedge maze at the Morton Arboretum outside Chicago with my family, Saga beeped my phone to warn me that it was going to start raining in nine minutes. Sure enough, a heavy but brief downpour began soon after, and I was grateful we had time to find shelter. Of course, other weather apps will do the same thing only using my location. Saga didn’t need to know my whole life to warn me of rain.

Chronos worked similarly to Saga, but without the connections to other social media services, and sent me weekly infographic reports on my life, which quite appealed to me. Back in 2008, I was intrigued when the now defunct travel site Dopplr sent me a similar personalised graph

(J.W. Rettberg 2009) and the graphs Chronos sends are clear descendants. The level of detail is astounding, though not always correct. For instance, the infographic shows the average hours and minutes I sleep on weekdays and weekends, basing my bedtime on when I turn my phone face down and leave it alone for a few hours and wake up time on when the phone is moved again. It estimates my time working based on how much time I spend at places I have categorised as ‘work’. It gives me a score for how social I am based on how much time I spend at places that are categorised as social/out, such as cafés, restaurants, movie theatres and museums. There are also some very normative scores. For instance, I scored 100% for work-life balance on the week I was on a family vacation and spent no time at places categorised as ‘work’, and 73% for spontaneity the same week, presumably because I didn’t do the same things as I do most weeks. Chronos also tracks time spent with my friends, but only friends who have also installed Chronos, and I don’t have many of them. I imagine the developers who made this app creating these measures of their imagined perfect persona, and think of Alice Marwick’s (2013) descriptions of the ways in which the ideologies and culture of Silicon Valley developers have permeated social media, inscribing quite specific cultural values into the tools that are used by billions around the world. But in addition to these cultural filters that are built into the app, the app is of course also constrained by technological filters: an iPhone can easily track a user’s location, or whether the phone is face down and still or not, but it can’t really know whether a user is working or sleeping. These apps can see that I’m ‘in transit’ when I do the child drop off and pickup rounds every morning and afternoon, but none of them register that the five minutes I spend at each of their schools are in fact fairly important points in my day. I don’t spend long enough there for the locations to even show up in my logs.

Capture All

A couple of weeks before I finished this book, the call for works for the upcoming 2015 Transmediale arts festival was published. ‘CAPTURE ALL’, the website proclaims: ‘Track steps. Track sleep. Track habits. Get fit. Get better. Update status. Count Heartbeats. Like Friends. Reach your goals. Share. Be influential. Be original. Find backers and back others. Work more. Work less. Be mindful. Send rewards. Predict actions. Chal-

lence yourself. Become a Low-Carb Data Hero. Play the game. Track life.' The festival will showcase works that 'outsmart and outplay the logic of CAPTURE ALL and that organise more intimate modes of post-digital life, work and play,... operating in and exploiting the blind spots of a datafied society.'

Transmediale is responding to the logic of a culture where it has become possible to record everything. We can store all our photographs, all our emails and all our text messages. Leaving the personal we also know that Google is trying to digitise all books ever published, that they are pretty close to having indexed all webpages and that they store data about all searches. This is very useful to us. I love being able to use Google Book search to search through old print books, or Google Trends to look at what people searched for in 2006, but it is a huge cultural shift from a very recent time where we had to select what to record, what to save and what to forget or discard.

The urge to exhaustively document everything is not new. In the late 1940s, the psychologist Roger Barker led a project attempting to document every moment of ordinary peoples' lives, as a counter to the constructed laboratory experiments that dominated psychology research at the time. Roger Barker and Herbert Wright's book *One Boy's Day* (1951) is a 435 page record of everything that happens to a seven-year-old boy during one fourteen hour day, recorded minute by minute by a team of eight observers. While the book was criticised for its lack of analysis or theory, being nothing but raw data, Barker later published an anthology of studies based on such 'behavior streams' as he called them (Barker 1963), coining a term very reminiscent of the streams and feeds of data we create and read today. And yet, even as videotaping made recording simpler, this kind of intense collection of every detail of a person's life did not become a common methodology until in the last few years, as computers have made it feasible not only to store such detailed logs but also to automatically record the data in the first place and to manipulate and analyse it. The Quantified Self movement with its blogs, conferences and meetups is the personal equivalent to big data: collecting and analysing data about oneself. Barker would have been thrilled to see the detailed streams of information about human behaviour collected by quantified selfers. But despite the promise of 'big data' we are still working out what kinds of questions can be answered by the data. Perhaps, as Alessandro Marcengo and Amon Rapp argue, echoing the critics of Barker's work half a century ago, Quantified Self 'is not something oriented to build

knowledge toward a purpose, but instead a way to collect data, like collecting butterflies [or] beer caps. [It is an] end in itself' (2014, 240). Perhaps we simply want to 'capture all'.

A photo every 30 seconds

The urge to gather and to collect is ancient among humans. Until recently, we have not attempted to 'capture all'. Collections have usually required some form of selection and curation. When we make photo albums or write diaries or post a photo to Instagram we intentionally choose what we want to remember and share and what we want to leave out. What happens when we automate the process? What happens when we try to capture everything?

The Narrative Clip is one of the first consumer products that promises to visually capture all of your life. The website explains, 'The Narrative Clip is a tiny, automatic camera and app that gives you a searchable and shareable photographic memory.' You clip the camera onto your clothing and it takes a photo every 30 seconds. 'Remember every moment,' the website urges as of 28 May 2014:

Capture the moment as it happens, without interference. Complement your staged photos of majestic scenery with the intensity of the small moments that matter the most.

The Narrative Clip is a descendent of custom built wearable cameras such as those pioneered by Steve Mann. His earliest head-mounted cameras were developed in the late 1970s, and he has continued developing them ever since, wearing them every day. Mann's systems aren't primarily intended for self-representation: rather, they provide the user with extra information about the world around them. In the mid-nineties Mann streamed continuous video from the camera he wore to his website, which became very popular. Soon thereafter, webcams became cheap enough to be a reasonable addition to a home computer, and video streaming from home became fairly common. Jennifer Ringley's JenniCam went live in 1996, broadcasting to the internet from her dorm room, in the vanguard of a whole genre of 'camgirls'. As quoted in Theresa Senft's *Camgirls: Celebrity and Community in the Age of Social Networks* (2008), Ringley wanted 'to show people that what we see on TV—people with perfect hair, perfect friends, perfect lives—is not reality. I'm reality' (16).

The aesthetic of the everyday and the ordinary and what Ellen Rутten (2014) calls the aesthetics of imperfection is familiar to us from reality television, craft blogs and oddly-cropped Instagram photos. Awkward angles, poor focus and unharmonious composition are all markers of a certain kind of visual realism. The automatic snapshots generated by the Narrative clip certainly fall within this aesthetic.

The first day I wore my Narrative Clip I fastened it to my shirt at chest height. Downloading the images at the end of the day, I found dozens of photos of trees and clouds, some obscured by my long hair partially covering the camera. The camera had been tilted upwards due to the angle of my breasts. Looking at the Wikipedia entry for 'Lifeloggіng' I noticed a composite image of four phases of wearable camera from Steve Mann in the 1980s until today, where the cameras were all worn on necklaces, by flat chested men in t-shirts. Lifeloggіng cameras were designed for people with flat chests, I concluded.

So I tried wearing the camera higher, clipping it to the top of my shirt's neckline, almost up by my shoulder, hoping that this would tilt it to capture more of what I saw when looking straight ahead. The results weren't much better, but the device did capture some faces of passersby in addition to the clouds and trees. I wore it walking to my six-year-old's school to pick her up and walking home with her as she cheerfully rode her scooter beside me. To my disappointment, when I viewed the images, my daughter was not in any of the photos. Neither did the Narrative Clip capture any photos of my four-year-old son when I wore the camera while playing with him at a playground. My children were invisible to the camera. I tried wearing it clipped to the pocket of my jeans instead, thinking I just needed to get the camera closer to their height. This time it did capture a couple of blurry photographs of the backs of my kids' heads as they shot off ahead of me on their scooters. But the photos from the playground itself were mostly of the clouds again, because when I sat down to watch the kids play the camera, still fastened to the front pocket of my jeans, tilted upwards. After the playground we went to a café, and there the camera captured its hitherto clearest images of people. Unfortunately, the people captured were the people at the table next to ours, people I had barely noticed at the time. The next day, I walked with my daughter again, and we sat down to eat our lunch, happening to sit across from a large advertisement pasted to the brick wall. My Narrative Clip captured several photos of the model's face, and its facial recognition algorithms marked this as an important moment, making the ad

the cover image for the series of photos from that afternoon. Later, my daughter wore the camera during her ballet class. Even there, with mirrors covering the walls and the camera clipped to the chest of her leotard, at the same height as the other children, almost all the images were of the ceiling, or her long hair falling in front of the lens, or the back of another child's head.

Clearly, the Narrative Clip doesn't record my subjectively memorable moments. It doesn't even record what I see: in fact, the 'best' images – such as those of the people at the table next to ours at the café or the photo of the advertisement pasted on the wall – are photos of people and things that were outside of my field of vision or that I had quickly dismissed as unimportant. Strikingly, my children were almost completely erased from my life as envisioned by the Narrative Clip. That is certainly not the intention of the camera. On the contrary, their marketing videos show parents capturing everyday moments with children.

The Narrative Clip photographs indiscriminately. A photo is taken every 30 seconds no matter what is in the frame. Back when we had to buy film for our cameras and pay to have it developed, we had to think about the expense of each photograph we chose to take. The cost wasn't simply financial, we also had to consider how many shots were left on the roll of film, as we wouldn't want to run out of film before we had captured a range of interesting images. With digital photography, individual photos have no cost, unless we are close to running out of battery or memory space. A camera that takes photos regardless of whether there is anything worth photographing is a natural development.

Digital photography also changes what is *photographable*, to use a term from Pierre Bourdieu's book *Photography: A Middle-Brow Art*. The book was first published in French in 1960, a time when photography was already a very common everyday practice. Bourdieu argued that what is photographable, seen as worthy of being photographed, is quite rigidly determined by social norms. Perhaps much of the discomfort we see surfacing around selfies is related to this: we are still bound by these social norms but technology allows us to photograph so much more than when the social norms for photography developed. The technological filter has changed, but the cultural filters are still in the process of changing.

Bourdieu doesn't directly write about self-portraits, but he does note that posture in photographs is important. He writes that '[t]o strike a pose is to offer oneself to be captured in a posture which is not and which

does not seek to be “natural” (1990, 80). Photography, for most people, was a ritual. It was not something done every day or continuously, but something that marked important events. On the other end of the scale, the marketing for the Narrative Clip claims that the most important events to capture for the future are not necessarily birthdays and weddings, but moments that are not usually photographed. Photography is no longer about documenting social rituals, but about documenting the everyday.

Clearly, part of the reason we take more photos is that technology makes it possible, easy and cheap. This is the technological filter that gives us the aesthetics of the everyday. If we always have a camera in our pockets, of course we will take more photos, and many of those photos will be taken on days when there are no ritual events happening: no weddings, birthdays or funerals. There is also a cultural filter, perhaps originating in reality television, but also strengthened by seeing more of each other’s photos on Instagram and in blogs. Even studio photography shows this shift. In her study of a photography studio run by three consecutive generations of a family in a small Norwegian town, Sigrid Lien (2014) shows that it is not just the photographer’s aesthetics of wedding photography that have changed from the 1960s until today. The most recent photographs are heavily influenced by the portrait subjects’ own familiarity with photography and the digital, and include many informal shots. Often the bride and groom’s faces aren’t even clearly visible. In one of the photos Lien discusses in her article, the groom faces away from the viewer as he holds his bride’s hand, leading her away from us into a field of daisies as she smiles back at the camera. In another the couple are seated in a boat on water, but their faces are outside of the frame.

There are also technological reasons for the new emphasis on capturing everyday moments rather than established rituals, as there were for the more rigid style of older photos. The photography studio studied by Lien is currently run by a young woman who has taken over from her father as he once took over from his father. The woman’s father told Lien about accompanying his father on photo shoots in the sixties: ‘Back then everything was much more uncertain and straining, ... particularly when you came back and were about to develop the films. Consequently you were more bound up and had to run the whole thing very safely’ (147). The granddaughter, the photographer who takes the contemporary wedding photos, explains that today they think about series of

photographs instead of single images: ‘We can tell a story. I think album. I think presentation’ (148). The serial nature of digital images, that I discussed in chapter 3, spills over into studio photography as well. The technology comes with certain constraints and affordances, but cultural filters are also crucial.

Algorithms to find meaning

The Narrative Clip is marketed not as a stream to the public, but as a private record of your days. The vast quantities of data need to be analysed if they are to be useful as a diary. The iPhone app where users can browse through their photos needs to analyse the images to display them in meaningful groups, based for example on location or people in the images, and to emphasise the most important images. Here every moment of a day is recorded as potential material for a diary, and only afterwards is it edited. Of course, the algorithms that determine what is displayed as important are written by people who decide on how to make the selection based on both our cultural filters and on what is possible or easy to do given the affordances and constraints of our technology.

For instance, what can biometric software analysis ‘see’ in images? It can recognise faces, and we might assume that an image with a face in it is more important than an image of an empty field, but the software cannot know if that field is in fact meaningful to the person who saw it. Perhaps you are standing staring at a now serene WWII battlefield where your grandfather was killed. Perhaps the poppies growing there are extremely meaningful to you, but how would the software know that? The camera can automatically collect visual information but lacks the knowledge of the human’s emotions and memories that make those images meaningful or not.

Biometric or other algorithmic visual analysis may be able to recognise what Roland Barthes calls the *studium*, the average affect a person feels about most photos, where he or she may be interested in the literal content of the photograph or about what it says about a place or a period (1981, 26). But algorithms cannot yet find Barthes’ *punctum*, the ‘wound’ that makes a photograph poignant to an individual. The *punctum* is not generalisable (27). A photo that affects me strongly (a three second video my uncle sent me showing my grandmother in profile, the light of the setting sun soft upon her wrinkled skin, a gentle smile in her eyes as she

nods, showing her as I remember her as a child) will mean nothing to you. For me there is a *punctum*, for you, perhaps you are interested in the image as a *studium* or perhaps not at all. Barthes' description of the way he experiences the *studium* reminds me of the way a machine reads an image:

[T]he photograph can 'shout,' not wound. These journalistic photographs are received (all at once), perceived. I glance through them, I don't recall them; no detail (in some corner) ever interrupts my reading: I am interested in them (as I am interested in the world), I do not love them. (41)

And yet, sometimes, the renditions of our days that a device such as the Narrative Clip might provide, or the automated videos of our year that Facebook generated at the end of 2013, do show us ourselves in ways that we find meaningful. Many friends I ask tell me that they hated Facebook's end-of-year video of their life, but there are also a fair share who liked them and thought they were a meaningful representation of some aspect of their life, perhaps even finding a *punctum* where others found none. We can imagine software that would learn what particularly moved each user. Maybe the software would register that a particular Narrative Clip user tended to pause and spend time near flowers, or trains, and might surmise that flowers, or trains, were particularly meaningful to that user. With this knowledge, the software might then further emphasise those items when displaying the user's photos, approaching what N. Katherine Hayles writes of when describing the machine as an active cognizer (2004, 84). Facebook, Google and other services constantly tweak their attempts to give us personally meaningful news feeds and search results based on our individual previous interactions, searches and likes (Bucher 2012) as well as on the words we use and many other factors (Kramer, Guillory and Hancock 2014; Gillespie 2014).

When our computers write our diaries for us, automatically logging where we've been, who we've communicated with, how we moved, what we ate and what photos we took, we have allowed technology to become very deeply enmeshed in our self-representations. Even when we write a diary in a blank paper book we are enmeshed in technology, bound by its constraints and affordances (Kirschenbaum 2012), but these automatic journaling apps do more than that, they are what Hayles calls *active cognizers*. She writes about the differences between print literature and electronic literature such as hypertext fictions or kinetic poetry, but if anything the computational processes involved in logging, analysing

and presenting our lives in the apps discussed in this chapter are even more involved in the distributed cognition Hayles describes:

It is no longer a question of whether computers are intelligent. Any cognizer that can perform the acts of evaluation, judgment, synthesis, and analysis exhibited by expert systems and autonomous agent software programs should *prima facie* be considered intelligent. ... When we read electronic hypertexts, we do so in environments that include the computer as an active cognizer performing sophisticated acts of interpretation and representation. Thus cognition is distributed not only between writer, reader, and designer (who may or may not be separate people) but also between humans and machines (which may or may not be regarded as separate entities). (2004, 84)

To follow Hayles, collaborating with machines in this distributed cognition means that we – as she writes, ‘in some sense’ – become cyborgs. Writing in 2004, Hayles was not thinking of smartphones logging our every move. But even just as readers sharing the act of interpretation and cognition with a machine she wrote that we were constructed as cyborgs:

Because electronic hypertexts are written and read in distributed cognitive environments, the reader necessarily is constructed as a cyborg, spliced into an integrated circuit with one or more intelligent machines. (Cyborg is of course a neologism coined from cybernetic organism, part organic being, part machine.) To be positioned as a cyborg is inevitably in some sense to become a cyborg, so electronic hypertexts, regardless of their content, tend toward cyborg subjectivity. (85)

Perhaps this is simply another way of saying we become quantified selves.

Gamified lives

Similar to the diaries Lejeune (2001) describes, self-tracking apps are always written in the present and always hold the promise of the next entry, the next logged item, the next steps. Even if you don’t use Runkeeper for a year or two, it will keep your data and seamlessly connect it to your new runs if you start using the app again. There is a promise of eternity in this software, although we know that at some point the device will be broken or lost, and the software won’t be kept updated forever. Wendy Hui Kyong Chun writes that software creates an ‘enduring ephemeral’: ‘Through a process of constant regeneration, of constant “reading”, it

creates an enduring ephemeral that promises to last forever, even as it marches toward obscelescence/stasis' (2011, 137). When machines write our diaries, our human choices and life spans no longer decide when or whether a diary ends. On the contrary, we have online identities before we are born and well after we die (Leaver and Highfield 2014).

Studies suggest that most people do not track data over long periods, although there are certainly examples of people who do so. Participants in a study by John Rooksby and fellow researchers at the University of Glasgow tended to use trackers for short periods of time, often switching devices or tracking different aspects of their lives. Rooksby et.al. argue that 'personal tracking might best be understood as prospective rather than retrospective,' and that it is strongly tied to goals (2014, 1168).

Activity trackers and fitness apps often cite statistics about users who have successfully lost weight or become regular runners by using their app. So and so many percent of users who log in daily lose weight, My Fitness Pal tells us, coaxing us to come back, again and again, much as a game like World of Warcraft builds in mechanisms to keep us returning and paying our monthly fees (S. Rettberg 2008). The apps are designed to keep us interested, sending notifications to our phones if we have ignored them for too long. If I neglect to open Heyday's automatic photo journal, it pops up a notification on the home screen of my phone: 'You took 3 photos at 3 locations. Did you see anything interesting today?' If I gain weight the Withings scale app, Health Mate, uses a red font instead of a green one and gently chides me, 'Let's keep our eyes on the goal.' But these are framed as temporary setbacks towards an achievable goal. Lejeune (2001) wrote about the four ways in which diaries can end. Automatic journals and lifelogs cannot end. You can delete the app, and possibly delete your data, but there is no closure to the narratives these apps tell. There is no happily ever after, and even death will not conclude your Facebook timeline.

Many activity trackers use elements of gamification in the system mechanics. The basic premise of these trackers has a lot in common with games: you have a goal (lose three kilos or run a half-marathon) and you are given challenges through which you can earn points that move you towards that goal. The goal is outside of the game mechanics, but by using a wifi-connected scale or a location and motion tracking smart-phone app the physical and digital aspects of the game are connected. As in complex games, there can be several goals. Runkeeper lets you select or type in your own overall motivation, where one default is 'Live a long and healthy life', but you can also set specific goals such as 'Run 38 kms

in a week', or 'Run 5k in under 30 minutes', which have progress bars, training plans explaining the steps that must be taken along the way and clearly defined points at which you have achieved your goal.

Paolo Pedercini argues that games are prime examples of the rationalisation Max Weber described in *The Protestant Ethic* and *The Spirit of Capitalism* at the end of the nineteenth century. 'If computer games,' Pedercini (2014) writes, 'in their immense variety, have anything in common, that may be their compulsion for efficiency and control. Computer games are the aesthetic form of rationalization.' And yet despite the grind of immensely successful games such as Farmville where human relationships are rationalised to 'most helpful friend' rankings, there are many games that explore alternatives. Listing numerous alternative games, Pedercini (2014) calls for resistance: 'poetic wrenches have to be thrown in the works; gears and valves have to grow hair, start pulsing and breathing; algorithms must learn to tell stories and scream in pain.'

Ian Bogost writes about a 'rhetoric of failure' in games designed so that the player cannot win (2007, 85). One could put Tetris or Space Invaders in such a category – the blocks or missiles keep falling until the player fails to keep them at bay, meaning that you will always, ultimately, lose the game. The winning situation, if there is one, is to get a higher score than your friends. Perhaps, as Janet Murray wrote of Tetris, this is a metaphor for a typical American life (1997, 144). But the games Bogost discusses as having a rhetoric of failure are so-called serious games, games that clearly aim to make an argument through their gameplay. An example is Gonzala Frasca's *Kabul Kaboom*, a minigame where the player controls a figure from Picasso's anti-war painting *Guernica*: a mother, mouth upwards in a wail, holding an infant. The background is a low-resolution cameraphone picture of the sky over Kabul, lit up with bombs, similar to the many photos in the news around the time of the attacks on Afghanistan. Missiles and bread rain down from the sky and your goal is to try to catch bread rather than missiles, which of course is impossible. You will always die in this game. As I wrote in an analysis of this and other games about Bin Laden in 2003, 'Games such as these make a double move. First they claim that a current situation is a game. Then they say that this game cannot be won' (Walker 2003, 163). Lifelogging apps likewise claim that the current situation is a game, but these gamified lives of ours are games that will never end. There is no winning or losing situation, only a series of goals. Once one goal is achieved we must work towards the next.

There are very few, if any, examples of lifelogging apps that resist the drive towards self improvement and rationalisation. There are individual art projects, but there is no *Kabul Kaboom* for lifelogging apps, not yet.

One app that does challenge the progress narrative is Carrot, ‘the A.I. construct with a heart of weapons-grade plutonium’ (meetcarrot.com). By mid-2014, Carrot has three apps: a to do app, an alarm clock and a fitness app. A to do list can be seen as a kind of diary, prospective rather than retrospective, but Carrot has more obvious game style mechanics than most to do apps, and gives you rewards and level ups when you complete tasks. However, Carrot has mood swings when you don’t complete tasks, and although there’s not really an ultimate goal to be achieved or a winning situation (there are always more tasks to add to your to do list) the rewards along the way are quite amusing. Early on, she gives you a kitten:

GIFT_001. I bought you a kitten! No really. A real live kitten. He’s sitting on server rack 13 right now, cleaning his paw. He’s black and cute and so, so tiny.

Instead of an ‘OK’ button, the button you have to click to get back to your tasks says ‘OH MY GOSH!’ When you complete several tasks in a row, Carrot’s textual response may be ‘Astonishing. Simply astonishing.’ Rewards continue to flow as you cross more and more tasks off your list: ‘KITTEN_002. Your new kitten is awfully cute. What should we name him?’ Your response screen shows two options: ‘Bob Cat’ and ‘Captain Whiskers’. If you stop completing tasks, Carrot has mood swings. Bad mood swings. The screen background switches from white with blue accents to an angry black with red accents, and she grouches at you: ‘It’s been 6 hours since you last contributed to society.’ Even if you complete tasks she’ll be angry: ‘You chose ... poorly.’

I used Carrot as my regular to do app for several weeks and enjoyed its sarcastic approach to time management and productivity. The mechanics of Carrot are basically the same as the mechanics of any other to do app, but by adding the sarcasm, the rewards and the mood swings, and of course the A.I. character’s constant insults (‘To-do list empty. Get something done, lazy human!’), it makes our obedience (or lack of obedience) to our apps even more visible.



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