Chapter Title: LIFESTREAMING: We Live in Public

LIFESTREAMING

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We Live in Public

The 2009 documentary *We Live in Public* told the story of Josh Harris, a late-1990s dot-com millionaire who funneled his considerable fortune into what he considered the future: people broadcasting their lives via internet-enabled closed-circuit television. Harris founded an internet television network with channels like "88 Hip Hop" and "Cherrybomb," but the technology was limited and only allowed for choppy, frame-by-frame video. When that venture failed, he built an underground bunker in Manhattan, filled it with television screens and cameras, and invited a collection of scenesters and technologists to move in. The bunker also included a shooting range, random cross-examination of participants, and plenty of recreational substances. (This experiment quickly devolved; the combination of drugs, alcohol, guns, and CIA-influenced interrogation techniques did not produce positive results.) Finally, Harris and his girlfriend fitted out their apartment with cameras, including one in

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the toilet, that broadcast to the web twenty-four hours a day, seven days a week. The website weliveinpublic.com included a forum where viewers could weigh in on the couple's activities and arguments. The relationship, unsurprisingly, did not last.[1]

Smith was eccentric, but his vision of the future has come to pass for a sliver of the population, especially in tech culture. Reality television, Skype, FaceTime, Twitter, Nike+, GPS-enabled cellphones, Instagram, Facebook, Spotify, YouTube, and hundreds of other media have popularized the capturing and broadcasting of personal information to large, networked audiences. While most of us don't live in apartments with bathroom cams, many of us have tablets or smartphones that make it simple to upload photos and micro-blog entries. The Pew Internet and American Life Project found that 88 percent of American adults own cell phones, and of those who do, more than half use their phone to go online. Of the 44 percent of adults with a smartphone, 90 percent access the mobile internet.[2] The influence of always-on internet has been rapid and significant. Texting, Facebook, and Twitter are used by teens to remain in nearly constant contact with friends, creating strong bonds of intimacy and togetherness.[3] Celebrities use Twitter to stay in touch with fans by strategically revealing insider information.[4] Web 2.0 folks intentionally reach out to followers to increase their visibility and social capital in the scene.

In the Introduction, I argued that social software may, inadvertently, promote inequality rather than countering it. In Chapter 2, I considered how metrics facilitate this process by rendering status into something that can be quantified, qualified, and publicized. In this chapter, I want to demonstrate how the process of "digital instantiation" likewise works toward quantification, qualification, and publicity by rendering users' lives in piecemeal fashion, unintentionally creating a whole that is larger than the sum of its parts. Social media tools digitize formerly ephemeral pieces of information, like what one had for breakfast, making it possible to create a bigger picture of a person or community's actions. Once "breakfast" is cap-

tured in a Foursquare check-in or Instagram photo, it can be combined, searched, or aggregated with other pieces of information to create mental models of actions, beliefs, and activities. Within this context, social surveillance, or the monitoring of friends' and peers' digital information, becomes normal.[5] While there are plenty of affective benefits to lifestreaming, there are also costs. Lifestreamers must see themselves through the gaze of others, altering their behavior as needed to maintain their desired self-presentation. This constant monitoring against the backdrop of a networked audience creates anxiety and encourages jockeying for status, even as it brings forth new forms of social information.

Looking at lifestreaming as a community property makes it possible to evaluate information disclosure beyond platitudes about privacy. If the authentic self of micro-celebrity is the self that discloses in the name of knowledge production, and the authentic self of self-branding is the one that edits in the name of knowledge consistency, how do individuals balance these competing notions of authenticity, avoid harsh social policing, and gain status for themselves within an information economy? Lifestreaming is worth studying because this is the terrain on which questions of authenticity and disclosure are currently playing out.

Framing lifestreaming in this way makes it easier to understand the prevalence of information disclosure within a social context where it is expected by peers. Rather than looking at social media use as an intrinsic privacy violation, lifestreaming needs to be understood as an act of publicity. Lifestreaming can be used to publicize knowledge; to gain emotional benefits, social capital, and information; or to shore up support in an argument, but it is rarely used as a way to disregard or eliminate privacy. Most lifestreamers have sophisticated understandings of what they would or would not share online. They balance their need for publicity with their desire to control their own online image. The necessity of presenting an edited self to the world requires a careful understanding of the risks and benefits of information sharing.

Always On, Always Tracking

Awesomesauce is on tap for today: Venice casa hunting, Doomies (omfg!!), Jumbo's (hello ladies), Coraline (ArcLight I <3 u)

At Seed for the second day in a row, repeating a southwest burger. So good.

I dont want to jinx it but me and @seanbonner are 85% getting the most amazing place right on the beach in Venice #goaheadbejealoussuckas

Doomies was deelish. I hope he can raise $$ to re-open in a good location

Off to ArcLight for Coraline. Jealous of everyone at the Grammy's!

Coraline was excellent. Moar 3D movies please!

—Partial Twitter lifestream from Tara Brown, 2/8/09

Lifestreaming is the ongoing sharing of personal information to a networked audience, the creation of a digital portrait of one's actions and thoughts. People who lifestream use software like Twitter, Facebook, and Foursquare to track information about themselves and make it available to others. By networked audience, I mean the real and potential audience for digital content, made up of people who are connected both to the user and each other. Lifestreaming is the "always-on" aspect of social media, the constant pings and alerts that make smartphones so hard to ignore.

The term "lifestream" was coined by David Gelernter, a computer science professor at Yale University. In a 1994 *Washington Post* article suggesting possible future uses for the "information superhighway," he wrote:

Your "lifestream" captures your whole life, in terms of chunks of information: letters, documents, bills, bank statements, video footage of your son's first birthday party, a database,

anything. Imagine a queue of documents laid out neatly on (say) the living room floor—only the queue might be tens of thousands of documents long, and it exists only as chunks floating in the void.[6]

A few years later, one of Gelernter's graduate students, Eric T. Freeman, developed software that organized files chronologically, creating a "time-ordered stream of documents."[7] Gelernter and Freeman envisioned a private, personal filing system that would help people organize their lives and memories.

Gelernter's vision of organized receipts and work documents has been realized in part, but contemporary lifestreaming is more expansive. Everyone who uses the internet has a detailed, persistent "digital footprint," created knowingly or unknowingly, actively or passively. Posting video footage of a child's birthday party to YouTube is active, while Google's tracking of every site its users visit without user input is passive.[8] Lifestreaming involves two processes, tracking personal information and broadcasting it to an audience, and most social media sites are designed to facilitate both aspects. Large sites like Facebook and Twitter serve as aggregators for niche sites like Spotify (music), Runkeeper (fitness), and GoodReads (book reviews), encouraging users to share data. Last.fm, for instance, has a plug-in for iTunes and Spotify that logs every song played, creating charts of top tracks and artists that can be displayed on Facebook, Tumblr, or personal blogs. Smartphone apps further assist users in tracking while on the go, often sharing information automatically.

The tracking aspect of lifestreaming is also called self-quantification, or "personal informatics." Self-tracking junkies monitor every aspect of their lives, from moods to sex life to temperature, often with the help of gadgets like the Withings scale (which tweets out your weight every week), the Fitbit pedometer (which wirelessly uploads your daily steps), and the Nike Fuel band (which tracks athletic output). There are a plethora of online tools for personal

informatics, like Curetogether.com, which lets people compare their symptoms and find possible causes, and BedPosted.com, which encourages users to track their sexual activities. This data can be aggregated and analyzed using customizable online tools like Daytum, which can track anything from "rides to work" to "types of coffee consumed."[9] The *Quantified Self* blog collects information about this movement and holds meetups in seventy cities in twenty-six countries.

Many personal informatics enthusiasts are devoted to the idea of optimizing themselves and their environments for maximum happiness; in other words, applying engineering practices to everyday life. Self-trackers believe that self-monitoring and regulating one's behavior accordingly are conducive to self-improvement. The research psychologist Seth Roberts, for instance, has popularized self-experimentation as he tracks his own weight, sleep, and mood to formulate theories on weight loss and depression.[10] Others use digital media to create a personal archive, such as taking a self-portrait or writing in a journal every day.[11] These projects echo the work of artists like Eleanor Antin, whose 1972 *Carving: A Traditional Sculpture* displays four photos a day of her thirty-six-day weight loss, and Linda Montano, whose "living art" works can last up to seven years. Such work, however, never expressly tied quantification to monetization, whereas personal informatics frequently are connected to broader economic goals.

Tracking one's personal information is not a new concept. Diarist Samuel Pepys recorded details of his daily life for ten years. Samuel Johnson and Benjamin Franklin were both compulsive self-trackers: Franklin kept a chart chronicling his daily adherence to thirteen self-identified virtues such as frugality, chastity, and humility.[12] Keeping a diary, even a very detailed one, is a fairly common practice today. Former Senator Bob Graham, for instance, keeps color-coded daily logs of his activities that are so meticulous that they were admissible as evidence in government investigations.[13] And tracking food and exercise, or simply counting calories, is a common precept of weight-loss programs. What makes

the lifestream different from its paper predecessors is that lifestreamers use the internet to make this information widely readable.[14]

Writing into Digital Being

Lifestreaming requires the digital instantiation of formerly ephemeral pieces of information. For instance, what Jim had for breakfast is ephemeral. There is no permanent record of his cornflakes. Few of us remember what we ate for breakfast last week, let alone years ago. But once Jim digitizes this information by tweeting about it, posting a picture of his cereal bowl, or carefully tracking his caloric intake, his breakfast is written into (digital) being. Similarly, defining a relationship as "it's complicated" on Facebook categorizes and codifies what may be a complex interpersonal interaction. The act of classification is political and ideological.[15] The social digitization encouraged by social media converts all sorts of nuanced interactions into cut-and-dried bits and bytes.

Lifestreaming is the sum of a person's digital parts, aggregated and monitored by others. The "digital self" that results is composed of particular types of information; it is a type of funhouse mirror, casting certain aspects of life into sharp relief but obscuring others. Lifestreamers can attempt to manage this self to create particular impressions, but the presence of a networked audience makes this challenging. Like self-branding, this management, if done "correctly," requires frequent, ongoing emotional labor. The lifestream is not a direct reflection of a person, but a strategic, edited simulacrum, one specifically configured to be viewed by an audience.

The Networked Audience

The audience is a crucial element of lifestreaming, because lifestreaming without an audience is simply tracking. Lifestreaming involves broadcasting personal data to other people, whether anyone with an internet connection or a subgroup of readers defined by a privacy filter. In a social group of lifestreamers, people place

themselves as part of a networked audience in which participants are both sender and receiver.[16] Looking at the collective lifestreams of a group shows that players constantly reference each other, revealing a coherent picture of social actions and connections within a community. Furthermore, almost all members of the tech scene contribute to their own lifestream. These lifestreams make up the Twitter stream of people one follows, or the Facebook News Feed of one's friends. Thus as each person lifestreams a piece of content, they are simultaneously reading the content of others, commenting on it, and adding it to their mental picture of the scene. Audience members watch each other's actions by consuming their content, and by doing so formulate a view of what is normal, accepted, or unaccepted in the community. This understanding of audience creates an internalized gaze that reflects community norms. Members of the tech scene imagine how the audience will view their own lifestreamed self-presentation, and alter it accordingly. Monitoring of oneself and others thus becomes an expected and normative part of this social interaction.

I use the term audience rather than the public when describing viewers of a piece of digital content. The term "audience" can refer to the imagined audience, the actual audience, or the potential audience for one's content. But while "potential audience" resembles the vernacular sense of "public," I use "audience" here to mean the actual audience, the people interested in a piece of information who actually view it. Just as media professionals do not use the term "public" for people watching a movie or TV show, we should not use it for digital content. The use of audience also implies performance, because a lot of digital content is created with impression management in mind. While it is never possible to determine who exactly has or has not viewed something online, because the actual audience may be very different from what a creator imagines, keeping in mind the difference between publicity done for an audience and information made public will help us to understand some of the social dynamics described in this chapter.

The networked audience is distinct from the broadcast audience in that the networked audience is connected. The tech scene is a superlative example of the networked audience, because the social element is articulated both on and offline. Unlike many online communities where a small percentage of people create most of the content, people in the tech scene act as both content producers and consumers to maintain status and intimate ties with the community. Lifestreamers read others' lifestreams and create content with their audience in mind. Their online and offline lives are intrinsically interwoven, meaning that nonparticipation has real social costs.

The networked audience is distinct from the networked public, which danah boyd defines as the social space created by technologies like social network sites and the imagined community that thrives in this space.[17] While it is possible to describe a single site like Twitter as a networked public (although I would not do so), I think the term networked audience is more appropriate for lifestreaming. "Networked public" implies a set of people communicating through a single technology (MySpace, Usenet, and so on), while the networked audience moves across sites. Moreover, the concept of audience as explained earlier implies a specific set of people interested enough to view digital content rather than an amorphous mass of potential readers. Given these properties, what does lifestreaming look like in a social group that uses social media intensively?

Lifestreaming in Practice

Lifestreaming is a normal part of the technology scene. People expect their friends to be familiar with the latest social media applications and to connect and engage using blogs, Twitter, and Facebook. As Auren Hoffman, CEO of the reputation management firm RapLeaf, stated in our interview: "If you were an employer, and someone applied and they didn't have any activity on social networks and that person was 23 years old, you'd think they were the Unabomber. You would be really scared to meet this person

without even a bodyguard. I don't even know if that person exists."
To people like Hoffman who are intimately familiar with Web 2.0
technology, not using social media marked unsophistication and
backwardness. In Hoffman's view, the relationship of employer
and worker requires the familiarity of common social ties and com-
munity involvement; nonparticipation would not only make it
difficult to contribute to social and technological conversations, but
also potentially limit one's economic mobility. Consequently most
people I knew during this period used microblogging technologies,
such as Facebook, Pownce, Twitter, and FriendFeed, to lifestream
media consumption, location, digital pictures and videos, and the
flotsam and jetsam of everyday life.[18] The availability of these
streams to an audience varied by individual and service, from en-
tirely publicly accessible Twitter accounts to password-protected
digital files. Lifestreaming ranged from piecemeal aggregation like
FriendFeed, a trendy piece of software that pulled in dozens of data
streams to create a semi-comprehensive picture of what friends were
doing across the internet, to personal blogs that dynamically aggre-
gated day-to-day doings.[19] While I did meet people in the technology
scene who used social media specifically to track personal data for
self-improvement, they were a minority.

Proponents say this type of networked lifestreaming facilitates
connections to others, deepens relationships, and creates a source of
real-time information. Sharing information through services like
Twitter creates an "ambient awareness" of others, a sense of what
friends and acquaintances are doing or thinking that builds up over
a long period of time.[20] This ambient awareness is akin to a sense of
co-presence, even if the participants are not geographically proxi-
mate. At the same time, networked lifestreaming often creates anx-
ieties about creating and maintaining one's social identity in front
of an audience, and the extra layers of social information can result
in intense social conflicts and arguments colloquially referred to as
"drama."[21] Drama is "performative, interpersonal conflict that takes
place in front of an active, engaged audience, often on social media."[22]

Drama can be a form of norm policing, where social media is used to call out community members who violate explicit or implicit social norms. While this definition of drama was formulated during a large-scale study of teenagers, it applies equally to other social milieus that display the same networked audience effects. Inferences and implications made visible by social media can reveal connections and actions that are usually tucked away from each other. These difficulties have given rise to a variety of different ways of conceptualizing the "public" and the "private" and of managing how information flows between different entities, websites, and users. This delicate balancing act is made even more difficult in a community where virtually everyone lifestreams.

Benefits of Lifestreaming

Jessica Mullen experimented with lifestreaming for her master's thesis in fine arts, which led to "The Lifestreamer's Manifesto: A Life Design Methodology." It states:

> Utopian lifestreaming embraces living life in public. Utopian lifestreaming fills your needs by creating a life support system to guide the daily decisions that add up to form your life.
>
> 1. I will document my daily activities to work towards my goals, even when I fail to meet them.
> 2. I will gauge my health and resources with online tools instead of burying my head in the sand.
> 3. I will share my experiences with my community for feedback and accountability. I will observe the experiences of others and help where I can.
> 4. As my lifestream grows, my reputation and confidence will do the same.
> 5. I will find the invisible patterns and systems holding me back and publicly eliminate them from my life. I will profitably share my hard earned knowledge.[23]

Mullen's manifesto frames self-regulation as entirely positive, while people in other social contexts might view it as rigid or strange. This manifesto focuses more on the benefits of self-tracking than the public aspects of living, but two of Mullen's points are worth investigating. When she writes "As my lifestream grows, my reputation will do the same," she shows that lifestreaming contributes significantly to status. Her statement "I will profitably share my hard earned knowledge" points to the material and immaterial benefits of the lifestream. While some people have managed to profit directly from online self-presentation through advertising, sponsors, or sales, others use lifestreaming to build up the identifiable online persona that is a crucial part of micro-celebrity and self-branding. But lifestreamers identify many other benefits that are largely due to the involvement of the networked audience.

One of the most important benefits is the previously mentioned ambient awareness of others, or the development of "digital intimacy."[24] While Twitter is frequently characterized as a chattering stream of irrelevant pieces of information, these pieces of information, gossip, small talk, and trivia serve to create and maintain emotional connections between members of the networked audience. A study by Gina Masullo Chen found that the more time people spent on Twitter, the more they felt a sense of camaraderie and connection with other users.[25] Kate Crawford, in her valuable piece on Twitter and intimacy, writes: "The communicative modes of Twitter, and others like it, operate as disclosing spaces. The 'confidences' relayed in these spaces create relationships with an audience of friends and strangers, irrespective of their veracity. They build camaraderie over distance through the dynamic and ongoing practice of disclosing the everyday."[26] Crawford argues that it is the "small details and daily events" that give "a sense of the rhythms and flows of another's life."[27] Regardless of whether the details given are significant or even truthful, Twitter streams feel like listening to a voice. Crawford conceptualizes Twitter as a place where people listen to others' disclosures, in an exchange that creates a sense of intimacy.[28] While most Twitter messages are not substantive in and of themselves, Vincent

Miller argues that they serve as phatic communication—as small talk that has the explicit purpose of "expressing sociability and maintaining connections or bonds."[29] This intimacy resembles the "telecocooning" observed among Japanese teenagers who form strong emotional bonds with others using only the cellphone.[30]

Participants told me that Twitter enabled them to stay in touch with faraway friends and deepened relational bonds with people they knew in person. Individual items from the lifestream, such as what music someone is listening to or where they are eating, probably have little or no intrinsic value to the audience. But each tidbit aggregates with other pieces of personal information to form a larger picture and reinforce a social bond. This experience was almost unanimously echoed by informants and was the most frequently cited benefit of Twitter. Kevin Cheng, a former product manager at Twitter, explained:

> Do you ever talk to someone you haven't talked to a long time and say, "What's new?" Say you give the update on your job. You give the update on your marital status. You give the update on whether you've moved or things like that. And then conversation kind of stalls for a while. And that seems counterintuitive to the fact that [with] the person you see every day, you can carry on with conversations for an hour or hours at a time . . . you've been gone so long that you feel like the events that are worth discussing have to be of significance. You're not going to say like, "My God I haven't seen you in a year. What's new?" "Well, I saw 'Forgetting Sarah Marshall' yesterday." What lifestreaming is giving us is that ability to keep up with the minutia.

Cheng identifies one of the difficulties of living in an environment where people expect to stay in touch. Social network sites like Facebook have created a semi-permanent address book of former coworkers, high school friends, ex-boyfriends and girlfriends, distant family members, and other acquaintances whom users may rarely

see. Twitter allows people to have an ongoing connection by sharing small pieces of information about the day-to-day experience that provide conversation starters and closeness. Andrew Mager, a former ZDNet employee who now works at Spotify, told me that Twitter enabled him to have personal interactions with one of his firm's executives, whom he could now ask about golfing and movies. To my informants, "intimacy" was a process of sharing knowledge about one another.

In addition to connecting faraway friends and acquaintances, lifestreaming helped people in the scene feel closer to each other. By scrolling through the day's Twitter updates or Facebook feed, people could see what others were doing. Video blogger Veronica Belmont, a self-described homebody, said, "I feel very connected to the community still because I know the minutiae of their lives through Twitter, through FriendFeed and Facebook. So you still have that sense of familiarity every time you run into them." Others said they became better friends with acquaintances after following them on Twitter. The virtual discussions and short messages reinforced in-person friendships. This was especially important for shy people who found online socializing easier, or were intimidated by the bustling social life of the technology community. Lifestreaming made it easy for people to mediate their friendships through the computer. Social media was also used to announce major life events, such as marriage, divorce, pregnancy, job changes, or family trouble. During my fieldwork, two couples in the scene announced their engagement on Twitter, while a single mother revealed her pregnancy and expressed gratitude for her followers' positive responses.

Others used lifestreaming to create accountability. Personal informatics enthusiasts used technology to record and monitor personal data, often using the internet to broadcast weight loss or health progress. For many, knowing that people were watching their data streams created a sense of obligation to an audience, much in the way that groups such as Weight Watchers or Alcoholics Anonymous use peer accountability to help members maintain desired behaviors. Similar principles applied to social obligations. Actions like wishing

people "happy birthday" and attending events were done in view of others, encouraging people to hew to social norms. And people who violated social rules in significant ways could be taken to task publicly (which often caused "drama").

Drawbacks of Lifestreaming

While social media's advantages have been chronicled extensively, so have claims of negative consequences. Social media has been linked to narcissism, as it is said to reward shallow social connections, vanity, and self-promotion.[31] Others state that social media is addictive, or creates information overload and attention deficit disorder–like symptoms that diminish long-term concentration.[32] None of these linkages have been proven, but they are frequently mentioned in scare stories about technology. While some of these negative effects were mentioned by informants, the most frequently discussed downsides to social media use were those relating to the extra layer of social information that the lifestream provides.

Somebody's Watching Me: Social Surveillance

Before the internet, people would learn about parties or romantic relationships by gossiping or asking friends. This type of knowledge wasn't secret, but it wasn't available to everyone and was rarely written down. Today, any member of the networked audience can peruse a Facebook invite to see who was or wasn't invited, or look at Foursquare check-ins to see who is spending time together. Social information is digitized and aggregated through the lifestream to create a layer of relational data that lays over the ordinary social graph. While this information facilitated bonding and personal connection, it also magnified gossip, suspicion, and uncertainty. A friend, "Jill," suspected that her boyfriend was having drinks with "Jane," whom she strongly disliked. Jill first noticed that her boyfriend's Twitter feed had been silent for several hours. She then saw Jane use Dodgeball to check-in to a bar on his street and subsequently tweet out a photo

of the bar. Jill interpreted this information to mean that the two were together, and was convinced that Jane intended her to know about it. Combining information from both people's lifestreams created a larger social picture that was interpreted through a lens of suspicion. In retaliation, Jill tweeted a message about trustworthiness without naming either party.

Social surveillance is the process by which social technologies like Facebook, Foursquare, and Twitter let users gather social information about their friends and acquaintances.[33] As Christina Nippert-Eng writes, "Humans are constantly scanning, constantly receptive to and looking for whatever they can perceive about each other, for whatever is put out there."[34] Eavesdropping is a very human action, and people are resourceful at combining information from disparate sources to create a "bigger picture" of social activities.[35] This picture is augmented by information provided on social media sites like Twitter or Flickr. Social media has a dual nature whereby information is both consumed and produced, which creates a symmetrical model of surveillance in which watchers expect, and desire, to be watched themselves. The presence of the networked audience not only enables connection, it encourages performances of intimacy and conflict to elicit reactions from others. Social media creates a context in which people are constantly monitoring themselves against the expectations of others—a context that can provoke anxiety and paranoia.

In the absence of face-to-face cues, people will extrapolate identity and relational material from any available digital information. Jennifer Gibbs and her colleagues found that online personal ads were constructed with a hyper-aware self-consciousness because users knew that misspellings, cultural references, and even time stamps were likely to be scrutinized by potential suitors.[36] Similarly, in textual sociable media like IRC or MUDs, people would infer identity information from e-mail addresses, nicknames, signatures, spelling, and grammar.[37] Digital traces and nuances are often interpreted incorrectly, but the act of interpreting becomes normal. Privacy scholar Helen Nissenbaum writes that the value of aggregation is in extracting "descriptive and predictive meanings from information

that goes well beyond its literal boundaries."[38] Social media users are practiced in the extraction of nuance through ongoing analysis of the lifestream. While each piece of information by itself may not mean much, it creates a larger picture when combined with others. For example, knowing that Julie visited a local bar on Tuesday night is not, in isolation, particularly interesting. The bar is publicly accessible, Julie can expect to be seen there, and she will probably tell her friends where she is. If she tracks, codifies, and broadcasts this information using social media, however, the information can undergo a transformation. If analysis of the lifestream reveals that Julie's best friend's ex-boyfriend was also at the bar, and this is the third night in a row that they have been in the same place, a new picture emerges. The accessibility and persistence of personal information tracked and broadcast through social media create an extra layer of relational data that is not easily explained by the dichotomy of "public" or "private." It is very complicated to manage self-impressions and relationships with others when faced with this phenomenon.

People in the scene recognized these complexities and shared strategies on how to handle them. For example, two Digg employees, Aubrey Sabala and Joe Stump, proposed a (rejected) panel at South by Southwest called "Is the internet killing your game?" which described how relationships were affected by the lifestream. Digital pictures posted on Twitter, Facebook, or Flickr were open to interpretation, meaning that someone who wasn't present when the picture was taken could jump to the wrong conclusion. As shown in the earlier example, "radio silence," or "dropping off the Twitterverse" for a day was noticeable and questionable. They also mentioned what they called the "right hand vs. left hand problem," which described situations where "not everyone knows not to Twitter something out." This occurs when a group of people have different information boundaries, and someone lifestreams something that other group members want to keep private. These practices reveal intensive attention to detail and monitoring of other people's lifestreams, which from my observation was common among members of the scene.

All of this extra information, and the additional meanings it sometimes implied, made the people I spoke to anxious. Since it was possible to keep close tabs on virtually anyone with a lifestream, people in my study spoke of trying, and failing, to resist the temptation to monitor ex-boyfriends and girlfriends, rivals, or partners. Some people installed browser software that blocked them from looking at specific Facebook profiles or Twitter feeds so that they would not be tempted to "cyber-stalk" exes or their new partners. But nothing was foolproof. If someone they wished to avoid was connected to the networked audience, their username or picture would pop up in retweets, @replies, and other people's Facebook messages. This created endless social conflicts, and I frequently saw someone get upset because they saw a picture of their ex in their Flickr stream, or noticed when a trusted friend checked in with a sworn enemy. Because the networked audience includes indirect connections (for example, someone connected to a friend or friend-of-friend), it makes visible those interactions that one could otherwise avoid.

Drama

The presence of the networked audience not only encourages the self-conscious performance of identity; it enables others to weigh in on social norm violations. In October 2008, for instance, Nick Starr and Tara Brown engaged in a public argument over allegedly stolen iPhones. The incident was so charged with drama that it is hard to tell exactly what happened; not only have the principal players written contradictory accounts, but these have been augmented by blog posts, Facebook status updates, and Twitter messages. Tara Brown, a former program manager at Microsoft and TopSpin media, is well known in the scene. She got engaged on Twitter to Sean Bonner, a similarly well-connected technologist based in Los Angeles (they have since married and had a son, whose baby shower was livestreamed). One evening, Brown used a Facebook invite to organize a *Rock Band* party at her house.[39] Nick Starr came to the party

with a date, Ben. The next morning, Brown realized her iPhone was missing, and asked people on Twitter if they had seen it.

> And my day gets even better . . . my iPhone is nowhere to be found since last night 1:12 P.M. Oct 17th

> Calling AT&T to report my phone stolen. I'm so sad to think it was stolen from my house. :(2:33 P.M. Oct 17th

Starr also tweeted that he had lost his phone at the party:

> Crap I think I left my iPhone at that Rock Band party @ekai or @msmelodi can you get me the number of whose place it was? 10:24 A.M. Oct 17th

Starr called Brown and found that her phone was missing as well, at which point he posted:

> WTF I thought I left my iPhone at @tarabrown's place but she said it wasn't there and her iPhone is gone too . . . wtf??? 1:15 P.M. Oct 17th

> Well it is official, my iPhone is gone, stolen, and/or missing. That effen sucks b/c I really don't want to spend the money for a new one. 2:15 P.M. Oct 17th

At this point the two stories diverge. After several e-mails, Facebook messages, and phone calls, Brown accused Starr's date, Ben, of stealing the phones, which Starr denied. She then accused Starr of stealing her phone. The conflict turned into an online argument. Both parties posted long blog posts telling their side of the story and called each other names on Twitter. In her personal blog, Brown wrote:

> So in my mind I was thinking about 3 possible scenarious [*sic*]: 1) Ben took it and Nick knew about it. 2) Nick took it

3) Ben took it and Nick didn't know. Either way, Nick brought this guy into my house and I as far as I'm concerned, needs to get my phone back or pay to replace it. A lot of other emails, IMs, tweets, etc. occurred throughout the day. I spoke to my Dad who is a Private Investigator and he said that the first email that Nick sent me was very suspicious. I went to the Mission Police Department to report this crime and they said the same thing.[40]

Brown's friends began posting messages on Twitter accusing Starr of theft:

Jpdefillippo: @nickstarr you are a stupid little shit who needs the snot beat out of you and next time I see you I will ablige. Bet on it.

DieLaughing: @NickStarr Actually it's time to move out of San Francisco. Saying 'Fuck @tarabrown' was the last straw. You are not local. Leave soon.

Starr responded with an equally long post responding to these tweets and refuting each of Brown's points (calling her a "lying cunt" and a "manipulative liar") and concluded:

I'm done . . . this whole mess is just too much . . . and guess what . . . IT'S ALL OVER A GOD DAMN PHONE! Tara lost her phone . . . so did I. Not one person seems to remember that my phone is gone too. I don't care what other people are going to say . . . I know the truth and the truth is that I'm as much a victim as Tara Brown is. If you have my phone, please return it. Thank you.[41]

Brown's phone was returned after a complicated series of events (an unidentified person in a hoodie left it outside her house; she, of course, believed this person was Starr), while Starr claimed that his was still missing.

When the dust cleared, both players were criticized by people in the scene for handling the situation publicly, with some characterizing the situation as having a "mob mentality" or as being "like high school." While Starr was not a particularly popular member of the community, some believed that Brown had abused the power of her audience (she had 1,205 followers, which was a relatively large number at the time). One informant told me:

> I made a cheesy Spiderman quote. And was like, "With great power comes great responsibility" and when you have that much power online with the number of followers and things like that, you have to be . . . you should be very responsible of what you . . . what accusations you make in public, right? That's like going on a loud speaker. It's a gigantic loud speaker especially with Sean [Bonner], as well, combined. And then not only to do that, but to make physical threats, um, yeah.

Both Brown and Starr portrayed the incident and their involvement in it in such a way as to gain the maximum sympathy from friends, followers, and people in the scene. Having over a thousand Twitter followers amplified Brown's accusations, bringing other people into the drama, but Starr had more than two thousand followers. It is likely that some of Brown and Starr's followers overlapped, but this is the nature of the networked audience. The networked audience is intrinsically involved in any event publicized over social media, and are able to use their own Twitter accounts, blog comments, or Facebook walls to add their opinions and thereby become an ever-present member of the conversation. Unlike the broadcast audience, the networked audience is connected through the lifestream, which allows for active participation beyond simply reading digital messages. The incident was debated both online and in-person, and the amplification ability of social media created a wider set of stakeholders in its outcome. Conflicts like these are dramatized as they play out in public, and serve as entertainment for the audience.

Further, while audience involvement can be seen as promoting accountability, social media also amplifies the amount of drama and conflict as other people besides the original two players become involved in the argument, chiming in much as gossip blog readers weigh in on the latest celebrity divorce or feud.

FOMO

Location-based social software like Dodgeball, Foursquare, and BrightKite were especially anxiety-provoking to my interviewees. People use these applications to "check in" to a place and broadcast their location to friends, making it possible to see where friends and acquaintances are at all times. If ten friends checked into a bar, the eleventh friend would wonder why she hadn't been invited. This feeling is recognized by many in the tech scene as FOMO, or "fear of missing out."[42] Deciding to have a quiet night in doing laundry can seem like the wrong decision when faced with pictures and tweets from friends doing something that looks more fun. Megan McCarthy explained:

> I mean, there are people that I care about that I'm really interested to know what they're up to. There have been situations where I've seen people that are going out and doing stuff and it's like "Hey, they're right in my neighborhood. Let's go hang out," so I like that. Do I see it as like a status thing? I guess. When you see a lot of people who are all like "Hey, I'm at this party. Hey, I'm at this party" and you're not, it's like "Why am I not at her party?"

Services like Dodgeball, the SMS-based predecessor to Foursquare, were developed with the ideal of facilitating spontaneous connections with friends.[43] While many tech scenesters told me that they loved that aspect of location-based social software, its popularity in the scene created a set of expectations and social pressure. Kevin Cheng told me that Dodgeball had inspired him to go out so much

that he wasn't getting his work, or his laundry, done. Cheng turned Dodgeball off to avoid FOMO. Location-based social software sits at the intersection of online and face-to-face socializing, and shows the importance of in-person interactions for cementing one's status in the scene. Notably, social software is explicitly designed for this; as Williams and Dourish write, "Dodgeball.com assumes discretionary mobility and leisure time. The service expects users to be able to switch locations effortlessly to socialize with friends, who are, naturally, available to socialize at about the same time."[44] In other words, services like Dodgeball and Foursquare are designed precisely for young, urban people like those in the tech scene.[45] But it was just this geographic proximity of people connected through always-on internet services that gave rise to a feeling that there was always something better to do.

Lifestreaming created other anxieties. People worried about their status in the community and whether they were participating appropriately. They fretted over what information should be revealed and what should be concealed. They regretted certain remarks they had made over social media and debated the appropriateness of others. Some even found the concept of an audience paralyzing in itself. Adrian Chan, an intense, cerebral interaction designer, said, "I'm hypersensitive, [I'm] unable to write or post tweets because I'm afraid they'll sound stupid, or people will read into their possible meaning, read things into it." While some people enjoyed performing for an audience, the potential public eyes made it hard for Chan to engage at all.

Overloading on Information

Many participants believed that lifestreaming created information overload. Some adopted techniques for managing it, such as sampling a little at a time. Dale Larson, an executive coach, explained, "There's too much good stuff to read out there. But if I just plug in to the noise for a little bit, dip my toe in it and get back out, I'll have a good sense for what's going on at a high level. And I'll know if

there's something I want to actively go after." In the scene, staying on top of current issues is a mark of status. Events like gadget launches, tech controversies, breaking news stories, and funny memes spread quickly through the networked audience, and people used Twitter to announce and discuss them. By reading a small sample of his tweets, Larson believed he could stay up on issues that were being talked about and thus maintain status and connection to the scene. Andrew Mager, who seemed comfortable with the San Francisco hyper-tech culture, told me:

> I almost say that the people are futuristic. They're from the future. They're like, "Oh, did you just, did you Twitter that? Did you Twitter this?" They just seem so up to date. Twitter is a phenomenon inside itself, but people are just so up to date. Even for me, when I first started here, it was very intimidating. Now, I kind of feel like I've caught up. But, for someone new jumping in, they would be totally bombarded and overwhelmed with it.

Plenty of people told me that they blocked Twitter during the day to boost their productivity. Others checked it only at certain times, or installed add-ons that helped them use the service more "efficiently." For informants with several hundred friends, Twitter would update every few seconds, creating a constant distraction. While the long-term effects of internet access on attention span are debated heatedly in the media, I found anecdotal evidence that the always-on, constantly updated nature of Twitter was both distracting and addictive.[46] It is impossible, however, to conclude from this whether Twitter, let alone the internet as a whole, causes behavioral or emotional changes. My informants consumed huge amounts of information from many different on and offline sources, including television, books, and newspapers.

The realization that people were using Twitter extensively, and were very closely monitoring their tweets, reinforced the strategic posturing and performance aspects of relationships that were being

maintained through social media. Although monitoring was framed positively, as a way for people to build social ties with others and remain connected to the network, it also engendered anxiety and suspicion. Given these downsides, why did people share so much personal information? How did people navigate privacy in this culture of sharing and surveillance? I found that most people in the scene framed this information sharing not as a disregard for privacy, but as a shift to publicity.

Privacy versus Publicity

Issues of information disclosure in social network sites are usually framed within a discourse of privacy.[47] For example, the introduction to *Privacy Online: Perspectives on Privacy and Self-Disclosure in the Social Web* summarizes:

> Communications and personal information that are posted online are usually accessible to a vast number of people. Yet when personal data exist online, they may be searched, reproduced and mined by advertisers, merchants, service providers or even stalkers. Many users know what may happen to their information, while at the same time they act as though their data are private or intimate. They expect their privacy will not be infringed while they willingly share personal information with the world via social network sites, blogs, and in online communities.[48]

This discourse maintains that social media users are credulous about their information disclosure, expecting privacy but unknowingly revealing personal data and making themselves vulnerable. Many studies confuse "information disclosure" with "lack of regard for privacy," but others have found no correlation between the two.[49] This inconsistency becomes more clearly understood when evaluating information disclosure online through a lens not of losing privacy, but of gaining publicity. My informants chose to reveal information

for political reasons, for self-promotion, and to participate in the social life of the scene, but they all maintained carefully considered boundaries between information they would and would not publicize online.

There is a difference between making information public and publicizing it. "Public" implies democracy, freedom, participation, and inclusion, while "publicity" suggests openness, visibility, attention, status, and spectacle.[50] Information that is public can, in theory, be accessed by virtually anyone, but in practice will probably only be seen by a few. In contrast, information that is publicized is strategically made visible to a greater audience through three dimensions: the effort it takes to find information, the ease of locating that information, and the interest in that information.[51] For instance, imagine that the records of an acrimonious celebrity divorce are made public. To read them, one must drive to a California courthouse, find the court records department, request them from an archivist, and wait for the records to be found. The requestor may be able, at best, to make a photocopy to take home.[52] These steps are significant barriers to obtaining the information, and so place it in a state of what law scholars call "practical obscurity."[53] But once a tabloid reporter goes through this process, scans the documents, puts them on the tabloid website, and adds an enormous headline, the records are publicized, or "hyper-disseminated."[54] Publicizing information is thus an effort to make it more interesting (by placing it on a tabloid site with a large headline), easier to find (through Google or other indexes), and easier to obtain (once it is online).[55]

The status element of lifestreaming, that is, the way that people share personal information with others in exchange for inclusion and intimacy within the technology scene, encourages publicity. Publicity is a crucial element of micro-celebrity and self-branding strategies. It is the strategic promotion of self-provided information. In *PR: A Social History of Spin*, Stuart Ewen writes, "The ability to publicize—self, product, concept, issue, or institution—is a basic survival skill in contemporary life, and field-tested publicity strategies are everywhere

to be found."[56] These public relations strategies are drawn from celebrity culture and product marketing and applied to social media, which incorporates status metrics that encourage people to publicize themselves to gain status, visibility, and audience. As Ernest Sternberg writes, "At every economic level, the ability to present oneself has become a critical economic asset . . . within any industry, corporation or profession, the aspirant reaches the economic apex when she becomes a celebrity, a human icon."[57] This is only possible with publicity. While I documented several distinct groups of attitudes about information disclosure, no one I met dismissed the need for privacy. Indeed, they were primarily motivated by publicity.

Publicity as Freedom

For many people I talked to, living a "public life" was a physical instantiation of the open and participatory ideals of Web 2.0, which holds that transparency is highly valued for its contribution to accountability and freedom. For instance, WikiLeaks, a website that hosts leaked documents implicating corporations and governments in various shady activities, claims that transparency is a check on power and injustice:

> We believe that transparency in government activities leads to reduced corruption, better government and stronger democracies. All governments can benefit from increased scrutiny by the world community, as well as their own people. We believe this scrutiny requires information. . . . But with technological advances—the internet, and cryptography—the risks of conveying important information can be lowered . . . Today, with authoritarian governments in power around much of the world, increasing authoritarian tendencies in democratic governments, and increasing amounts of power vested in unaccountable corporations, the need for openness and transparency is greater than ever.[58]

The Freedom of Information Act makes many U.S. government documents available by request, reinforcing the idea that the people have a "right to know." The internet creates new opportunities for transparency by facilitating cheap and easy document publishing, widespread feedback, and increased communication between governments and constituents or corporations and customers. Yochai Benkler writes in *The Wealth of Networks* that increased transparency in corporate decisions, such as Google's use of a link to the Chilling Effects website to explain why certain search results for "Scientology" were removed, invites reflection about the meaning of culture and thus encourages "writable," or participatory, culture.[59] (Google's actions could also be considered a public relations strategy designed to appeal to an audience that values transparency.) Similarly, in *Code 2.0,* Lawrence Lessig argues that "open code is a foundation to an open society" and compares open code to public lawmaking.[60] In Chapter 1, I discussed how ideals of openness and transparency were realized in the organizational structure of activist groups and in the licenses of free and open-source software. In this context, self-disclosure is framed as a way to embrace and enact the principles of openness in everyday life.

There is a distinction between openness and transparency: openness is about making all information available, whereas transparency happens when there is a policy of making useful and relevant information available.[61] For example, when asked for climatology statistics, an environmental agency might make hundreds of thousands of pages of raw data available. This act of openness is neither useful nor readable. Creating and disseminating a top-level summary document that can be consumed easily, however, is both useful and readable and represents transparency. Similarly, true openness in one's personal life means allowing everything to "hang out" in a nonselective way, whereas transparency provides useful and meaningful information. When considering personal information, what is "meaningful" is a normative judgment that may vary widely among members of the audience. But the distinction between revealing everything and selective divulgence is important.

When the ideals of openness and transparency are applied to one's personal life, they may involve disclosing drug use, sexual habits, or emotional vulnerabilities via the internet. This type of "public living" was heralded by some as signifying a new era of greater freedom in which people can be authentic without judgment or prosecution. This mindset holds that society is inevitably moving toward greater transparency, as demonstrated by the increased visibility of previously hidden subcultures and increased respect for minority rights. "Gay rights" were often offered as an example, with "coming out" framed as a brave, political act.[62] According to this view, until this larger social shift takes place, people must courageously pioneer the principles of openness. If everyone reveals enough personal information, nobody can be discriminated against and culture will change for the better. Dale Larson stated:

> At the point where critical mass is reached of everybody exposing enough private information, it becomes too honest for anybody to pay attention to it all and try to discriminate on it. At the point where everybody really is out there with whatever their little weird thing is, that's the point at which you stop, when you say, "Oh, you know what, a fact with humanity, is that all of us have some weird freaky thing we fantasize about, or some weird freaky thing that we're afraid of, or some weird freaky thing that, I don't know, that's what's normal!" There's no such thing as a weird freaky thing. But until that critical mass happens, it's an act of courage to put that picture up on your Facebook . . . and it's an act of courage that, you know, very much comes with some tradeoffs.

According to this viewpoint, weathering the drama caused by publicizing formerly private acts is the downside of living one's life truthfully and authentically. Larson acknowledges the possible negative consequences and that "public living" requires emotional effort and bravery, but he believes that the eventual social benefits are more important. He also suggests a version of "authenticity" that

implies the full disclosure of what may be very personal habits. Authenticity is thus defined as publicity, not simply a lack of artifice.

Computer scientist Tantek Çelik further claimed that "living in public" exemplifies Western ideals of democracy and freedom for the rest of the world:

> And, you know, if that means I sacrifice some amount of opportunities whatever, then I think that's good because it opens the door for more people to feel free to do that. And the more people do that, it's like eventually the flood gates break open. It's unstoppable . . . if you want to talk about making a difference in the world, I think that's one of the things that is probably one of the most important things any of us can be doing. Like okay, we have the privilege of a free society, how come we're not using it. As opposed to a lot of theocracies, it's like they don't have that choice, right? So, the more you can set a better example for people in the world as a whole and even if you make them jealous that you have an open, free society and want . . . to change.

This position follows conservative political ideologies that position American society as a global model of freedom and democracy.[63] Çelik expressed frustration with what he saw as the status quo notion that authority figures are expected to live conservative lives. He believes that he can combat this viewpoint and challenge authority by simultaneously being a leader in the technology community and living in public. Thus openness online becomes a political act.

Idealizing openness implies that there should be no difference in self-presentation regardless of circumstance. Under this particular definition of authenticity, an honest and forthright person will be who they "really are" consistently, regardless of who is listening. But this view does not reflect the realities of how people differ in the ways they use gesture, language, and tone to manage impressions face-to-face.[64] The idea of a single, "authentic" self, although it

carries a great deal of currency in contemporary American culture, is a social construction, one at odds with actual social practice.

Promoting transparency also implies that privacy is only necessary for people who have "something to hide." Eric Schmidt, CEO of Google, told CNBC that "if you have something that you don't want anyone to know, maybe you shouldn't be doing it in the first place" (he later claimed he was joking).[65] The idea that privacy is only necessary for those engaging in illegal activities is, unfortunately, widespread in the general U.S. population, yet it does not hold up under scrutiny. Virtually everyone who advocates openness in their personal lives is talking about being selective in what they reveal rather than making everything about themselves available: I do not believe Schmidt would want his credit card number or a naked photo of himself appearing in the *New York Times*. This presumption was tested when tech news outlet C|Net Googled Schmidt and posted personal information about him online. Schmidt did not talk to the technology news outlet for several months afterward, allegedly in retaliation.[66]

Privacy theorists Daniel Solove, Priscilla Regan, and Helen Nissenbaum all argue that conceptualizing privacy as secrecy ignores the myriad of other reasons that privacy is necessary.[67] Solove writes: "Even surveillance of legal activities can inhibit people from engaging in them. The value of protecting against chilling effects is not measured simply by focusing on the particular individuals who are deterred from exercising their rights. Chilling effects harm society because, among other things, they reduce the range of viewpoints expressed and the degree of freedom with which to engage in political activity."[68] Allowing absolute electronic surveillance limits government and corporate accountability, creates an imbalance of power, and, overall, compromises social freedom. When Çelik or Larson idealize living in public, they are not talking about complete disclosure of personal information, but instead transparency along specific lines, namely drug use and sexuality. The belief that these aspects of life should be publicized, however, has an ideological function.

Promoting absolute openness disregards the privilege of most people in the tech scene. It is one thing for a wealthy, white male programmer to admit that he sometimes smokes pot. It is another for an undocumented worker to publicize his immigration status, or for a woman escaping a domestic violence situation to reveal her home address. Advocating "openness" ignores the very circumstances that may make self-disclosure dangerous. Furthermore, upholding personal transparency as an ideal supports the business models of social software, which profit from information disclosure. Mark Zuckerberg said in a 2010 interview:

> And then in the last 5 or 6 years, blogging has taken off in a huge way and all these different services that have people sharing all this information. People have really gotten comfortable not only sharing more information and different kinds, but more openly and with more people. That social norm is just something that has evolved over time . . . We view it as our role in the system to constantly be innovating and be updating what our system is to reflect what the current social norms are.[69]

Zuckerberg echoes the belief that society is becoming more open, claiming that Facebook is changing its privacy settings to reflect this. But Facebook has a huge vested interest in encouraging people to publicize personal information, since they make money by selling user data and "eyeballs" to marketing firms, data aggregators, and advertisers. The more people depend on Twitter, Foursquare, or Facebook to learn about their friends, the more money their parent companies make. Zuckerberg's interpretation of "openness" does not cover corporate openness—Facebook and Apple are notoriously tight-lipped—but only personal openness. While people like Larson and Çelik are well intentioned, selectively revealing information to a targeted audience is not the same as, say, coming out as gay in Iraq. They frame openness as socially beneficial, but the tools and culture of Web 2.0 have evolved to promote a particular kind of

openness and transparency because it drives profit to social media companies, not because it furthers freedom and democracy.

Privacy through Disclosure

I also encountered the belief that strategically publicizing personal information was a way to maintain privacy. Melissa Gira Grant told me:

> In terms of the public/private divide, I think people think I have no private life. Because I talk about a lot of very intimate things but I use that strategically. [But] there are a lot of private things that I would never even think to talk about and people don't even know; they can't even conceive. They think that because I'm talking about sexuality or activism or things I'm very passionate about that they must know everything about me, which is a marvelous way to have a private life. Because people think they already know your dirty secrets.

Grant is a blogger, author, and sex-work activist who was romantically involved with former *Valleywag* blogger Nick Douglas during the period of my fieldwork; the two had a tumultuous relationship with a visible online component. She posted a lot of personal information online, including nude pictures, stories about her sex life, and arguments with her partners. But Grant had clearly defined boundaries around personal information sharing. She believed that sharing more than most people online (for example, her fervent writing about sexuality) allowed the rest of her private life to fly under the radar. While Grant reveals more online than many people do—she is contemplating a project that would document her sexual encounters—she is playing a character, the feminist performance artist known for her forthrightness, rather than living her entire life in public. It is precisely through revealing more that she attempts to conceal what she wants to keep most private; she is still presenting an edited self.

Grant's position also reveals the extent to which "public living," and therefore publicity, is necessary for a successful member of the tech scene. For Grant to maintain her freelance career, she needed a visible public persona. Much of her work involved advising non-profits on social media use, so it was vital for her to demonstrate proficiency with the technologies. And as a sex writer and activist, she was expected to blog and tweet about sex, relationships, and intimacy. Her strategy to reveal the very personal was not only a way for her to keep some topics to herself; it also enabled her to attract an audience and to interest freelance clients. She was able to use this audience interaction to build her career further; in 2010, she and a partner used Kickstarter, a "crowdfunding" site that solicits donations for creative projects, to raise more than $17,000 to print an anthology of sex writing.

Publicity as Strategy

The third viewpoint that I encountered had to do with traditional publicity, or the revealing of information to maintain one's personal brand or to boost micro-celebrity. While extensive use of social media is necessary for many technological careers, this can create conflicts with employers, as Ariel Waldman explained:

It really bothered [the company] that there was any entity online where it was me, meaning all of me and not divided. Like they didn't want to have my title associated with stuff I did personally. They're like, "Can't you create a different account, to separate them?" I'm like "This is my name" . . . they were saying things to me like, "The way you live your life online is an obvious detriment for your career," and I was like, "No, it's not," and they got really pissed. It was two different languages because they couldn't understand that I wouldn't have a career if I didn't live my life online the way I was.

To Waldman, the publicity gained through lifestreaming was necessary to cement her reputation as a social media expert. She maintained that any account under her name needed to be "all of me and not divided," with anything she came into contact with being fair game for Twitter. Rather than keeping her accounts highly edited, Waldman aimed to build a strong brand that would transcend a single client. This reveals the intrinsic conflict between self-branding and corporate employment, since what may be best for the company is not always in the self-brander's self-interest. To Waldman, showing facility with social media was more important than the needs of one client. Moreover, because authenticity is so highly valued in the technology community, discussing both personal and professional topics on social media helps build ties with an audience and deepen intimacy, strengthening the brand or increasing micro-celebrity status. But although Waldman used pieces of personal information to build emotional ties with her audience, she withheld many things from social media. While disclosing personal details is valued as a marker of authenticity, strategic self-presenters tactically manage and limit self-disclosure.

Looking at information disclosure as the desire for *publicity* reveals the complex negotiations that lifestreamers face between disclosure and reservation. While many people have looked at the problems created by shifting notions of private and public on social networks, there is little work on the impact of publicity, openness, and audience on communities that constitute networked audiences. That these issues create problems is widely acknowledged, but there is no agreement on how to handle them. Since revealing personal information online has both benefits and drawbacks, choosing how much to share and with whom is approached differently. Within the scene there are numerous degrees of public-ness, from people who graphically document their sex lives to those who adhere to a strictly professional self-presentation. On one end of the spectrum, Nick Starr tweets about sexual activities, homelessness, his HIV status, and plastic surgery. On the other, Julia Allison, who is

considered very public, does not lifestream meetings with potential clients or famous friends so as not to compromise her business dealings. Still others choose not to speak publicly about their children or their relationships, but carefully dole out other pieces of personal information to appear authentic to their audiences. These choices are affected by the software that people use, their motivations, and complex webs of obligations to others. But even people who reveal a great deal of personal information online do this thoughtfully.

Managing the Lifestream

Because lifestreaming has emotional and personal drawbacks, people employ many creative strategies to manage online presence and impressions. An enormous amount of work goes into maintaining "the edited self." Deciding what information should be private and which should be public is labor. Tara Hunt explains the drawbacks of "open living":

> The only sort of drawback is that I can't cuss, purely or literally let my hair down in a certain way anymore privately, . . . because everything I do has to reflect the public image that I need to keep up. That's the irony of openness, because it's not so open, right? It's a manufactured openness in that way, that it's always filtered. It's kind of like open source; anybody can take the code and mess around with it but there's a very structured way of doing it. And you check in and you check out and you sign your name to it. And you have to go through certain meritocratic levels to work on the kernel. It's not like people can just take the code and just fly with it and open living is the same way. It's ironic because it's ultimately less open, in a lot of ways, personally, that's my experience.

Hunt is open about many aspects of her life; she tweeted that her son had run up a $1,051 phone bill texting his friends in the United

States, and asked for advice on how to manage the problem. But Hunt has defined a set of acceptable boundaries for information disclosure—she generally avoids talking about relationships or dating—and strictly manages her self-presentation. This management requires self-monitoring, seeing herself through the gaze of others and altering her actions accordingly. As a result, Hunt is constantly working to produce and edit her desired image.

Others decrease their involvement in social media to reduce anxiety or drama. People in the scene often cycled through phases of social media use, from intense to mild. Glenda Bautista told me that people often scaled back their information disclosure after one particular incident. In her case, Bautista began the difficult process of "locking down" her online presence after a recruiter referred to her personal blog and boyfriend in a job interview.

Because the lifestream exists among a networked social graph, people must monitor both their own information disclosure and that of their friends. Bautista recognized that her desire to be less public online was a losing battle:

> I remember once, just to keep my name out of Google, or just to not have anything track back to me, I tried to redo my last name, so that it wouldn't be attributed to me. That didn't go well, because some people . . . It's not that they have big mouths, it's just that they don't know where my line is . . . some people literally do not have the boundaries. And it takes too much policing, too much energy to literally be like, "Take that down, put that up . . ." I mean, it's exhausting.

People frequently reveal information about others, deliberately or inadvertently, through the lifestream. Someone without a Twitter account can be referenced in a tweet. A person who chooses not to check in at a bar can still be photographed by another patron. Someone can be tagged in a photo on Facebook even if they do not have a Facebook account. Two users who are not directly connected through social media site may appear in each other's streams through

mutual friends. The previously mentioned problem of "right hand, left hand," where people at an event have different informational norms, can create conflicts. For example, "John" may not want "Mike" to know that he is having dinner with Mike's rival "Chris." But Mike may learn this anyway if Chris tweets or blogs about his dinner with John. John can ask Chris to keep the dinner secret, but ultimately he cannot control how private this information will be. Andrew Mager elaborated: "It's almost like you're too transparent. I was sitting with the editor of ZDNet last night, Larry Dignan, and he is like a top writer, and he is like, 'I'm scared of Facebook, because all my middle school friends are going and scanning photos,' and he is like 'I don't want all that.' Almost now we're at the point when we don't have control over what people publish about us." Dignan is a professional who presumably does not want his online reputation sullied by unflattering childhood photos. Even sans tags, online photos can be misinterpreted. A friend once asked me to remove a picture of him hugging a female friend from my Flickr stream, because he did not want his notoriously jealous girlfriend to misinterpret it. As Glenda Bautista said, monitoring can be "exhausting," a form of emotional labor. It may also be impossible, because new tools and sites are constantly being developed.

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Contrary to the utopian theories of transparency and openness promoted in Web 2.0 discourse, and the moral panics around lack of privacy online, lifestreaming is not an unvarnished digital stream of someone's online actions. Instead it is a carefully edited, purposeful construction of self. Lifestreamers choose what to reveal and conceal: they monitor their own and other's actions, publicizing certain aspects of their lives while keeping other parts to themselves, and they may even exaggerate or falsify information to produce a desired effect. The resulting lifestream is an attempt to inculcate a particular version of oneself that appeals to others in the networked audience. This should not surprise anyone familiar with the intricacies of face-to-face communication. People vary their self-presentations based on context and audience; we present ourselves

differently in a job interview than we do in a bar with our friends. Social media technologies are distinct from face-to-face interactions, however, in that they frequently demonstrate "context collapse," where every relationship has equal balance and widely variable social contexts are "collapsed" into one.[70] On Facebook or Twitter, where it is very tricky to vary self-presentation, both potential employees and friends could be part of the same audience. But there are flagrant contradictions between the ideals of transparent, public living and the realities of lifestreaming in a community where virtually everyone lifestreams. Lifestreaming creates an additional layer of social information: by digitizing previously unrecorded things and forming, in the aggregate, a whole that reveals more than the sum of its parts, it becomes part of a digital mirror held up to the scene that often reveals more than the participants intended. The arguments, contradictions, and dramas that play out as a result cause people to hold back, restrict, and manage their lifestream. The lifestream becomes a portrayal of a formal, edited self. Even those who pride themselves on their risqué or boundary-pushing public life make careful choices about how much to reveal or conceal. Unfortunately, self-presentation in the lifestream is not wholly self-dependent. The tagged photos, @reply references, and Foursquare check-ins provided by others can be monitored, but rarely changed.

Social media applications encourage people to provide personal information as part of their business model, but often, putting personal information online is interpreted by researchers and the media alike as a lack of concern for privacy. This ignores the fact that participating in social information-sharing has many benefits, including intimacy, friendship, and status. There are strong social pressures to participate in social media in the technology scene. Nonparticipation marks one as an outsider and a Luddite, and limits how far one can go in the community, and perhaps professionally as well. Rather than expecting theories about privacy in the public sphere to explain these behaviors, we can understand information disclosure as an act of publicizing the self to a networked audience.

The value of visibility and access motivates people to share with each other, resulting in affective benefits. The inclusion of many members of the scene in the lifestream both enables these benefits and creates emotional and social drawbacks.

I found no correlation between how much someone cares about privacy and the amount of information they put online. For instance, Melissa Gira Grant reveals a great deal about her sex life, but is very protective of what she chooses not to share. Frequent tweeters are upset if a friend's tweet publicizes something they did not want disclosed. These findings are supported by other empirical studies showing that information disclosure does not imply a lack of concern for privacy.[71] People employ strategies like withholding certain pieces of information, monitoring their friends' use of social media, adopting varying definitions of privacy, and editing their own lifestream in order to maintain a level of privacy they are comfortable with. Due to the imprecision of these controls and the new levels of inference possible with aggregated social information, however, it is often impossible to avoid drama in a community where social life exists both on and offline, and where information sharing is a normative behavior. Further, while the Web 2.0 culture may frame this sharing within a discourse of freedom and democracy, we must remember that the profit models of social media depend on user-contributed information. Perhaps not surprisingly then, the models of openness idealized by Web 2.0 both ignore the negative consequences of transparency and promote a particular type of transparency that privileges the kinds of information sharing that benefit corporations more than individuals.