

“I’ll press Play, but I won’t listen”: Profile Work in a Music-focused Social Network Service

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ABSTRACT

We offer the concept of *profile work* to illustrate the effort people invest in their public profiles in social network services (SNSs). In our explorative study, we investigated profile work in Last.fm, an SNS that automatically publishes music listening information. We found that, instead of simply not publishing things they might rather keep private, users tend to change their music listening behavior in order to control their self-presentation. Four dimensions of profile work were identified, including detailed mechanisms to regulate one’s profile. We suggest ways to support users’ profile work in the context of automated sharing of behavior information.

Author Keywords

Social network service, privacy, self-presentation, profile work, music, automated sharing

ACM Classification Keywords

K.4.1 Privacy, K.4.3 Computer-Supported Collaborative Work, H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

More and more social network services (SNSs) offer users the opportunity to create a profile to present themselves to other profile-owners. As the number of SNSs that one uses increases, so does the number of profiles. Music plays a considerable role in many SNSs; musical preference is a typical part of personal profiles telling other people of one’s likes. There are even SNSs, such as Last.fm (www.last.fm) and MySpace (www.myspace.com), that are largely dedicated to sharing of musical preferences as well as knowledge of music and information on it. At the same time, the domain of music sharing has been brought into CSCW, showing the impact of technology on music listening [4].

This paper considers the importance of music both for its personal significance to the users and for the information it offers on users’ behavior. We use information about online music listening behavior as a lens for exploring users’ experience of maintaining an online profile and propose the concept of *profile work* to summarize our findings. The online music community Last.fm was chosen as the empirical ground for this study since automatically shared online music listening information offers a new entry point to exploring users’ perspectives on SNSs. By examining users’ experience and management of automated sharing of behavior information, our study illuminates, in the tradition of Goffman’s self-presentation [9], how individuals negotiate their public personas through detailed manipulation of behavior. The paper contributes to knowledge of music-mediated self-presentation online [32] by exploring a context in which profile content is produced via automated sharing.

Last.fm is an SNS that uses actual music listening information for its users as the primary content for their profiles (Figure 1). Users download to their personal computers an extension called the *scrobbler*, which will record, or, in Last.fm’s terms, *scrobble*, all audio tracks that are played on the computer. The scrobbler sends all music listening information to the user’s profile on Last.fm in real time, thus sharing it publicly online. In practice, this means that a user can listen to a track while not logged in to Last.fm and the listening information will still be recorded in her or his profile. All music listening information is gathered in the user’s profile, where it can be seen in the form of statistics and visualizations. Hence, the user’s behavior is public by default, either to all users of the service or to everyone in one’s network of contacts in the service.



Figure 1. Last.fm profile.

We interviewed 12 active users of Last.fm and analyzed the material, looking for the users' personal explanations for their feelings and actions. Our results show that users encounter remarkable complexities in having a profile and that effort is required to maintain and manage a public profile. The users consider their profiles to be products that are guided by the interpretations made of others' and their own behavior. Personal desires and social norms may conflict and cause tensions for the users. These tensions are diminished by means of *profile regulation*.

Profiles in SNSs are typically easy to acquire and quick to set up, yet maintaining one is not necessarily a simple and effortless matter for the user, especially when the content is produced by automated sharing. The finding that users are ready and willing to go as far as changing their actual music listening behavior for the sake of their profiles makes a strong case for the significance of profile work. The paper, by focusing on public profiles in a music-focused SNS that features automated sharing, contributes to increased understanding of the implications of publicness of behavior.

Furthermore, as social network services keep growing in popularity and automated solutions are applied more widely, understanding self-presentation in the context of automated sharing has become essential. We discuss ways to leverage automation without losing sight of the meanings that users' action have beneath the surface of automatically shared behavior information.

RELATED WORK

Self-Presentation in Social Network Services

The ongoing research on SNSs has found self-presentation to be a very central determinant for existing phenomena under study. Profile creation and management are among the self-presentation-related privacy issues highlighted in the considerable work done in the field of SNSs [3].

Discussions of privacy often refer to risks such as a criminal gaining access to private information and harming one by illegal actions [5], but, in the context of online sharing, privacy requires a more multifaceted definition [15]. For instance, having a profile in an SNS exposes one to privacy risks of a different kind, such as someone misusing data the user has shared or users revealing too much about their lives and thereby ending up in difficult or embarrassing situations [15]. According to recent findings, younger people emphasize the latter kind of social privacy [21].

Initially, a psychological feature called *self-presentation* causes people to worry about how they appear in front of others. Concerns about self-presentation can be seen as one element at the core of issues of social privacy. Self-presentation is commonly linked to Goffman's [9] theorizing on how people negotiate and validate identities. Self-presentation is a process involving two forces: self and others. It allows individuals to communicate their affective

states, status, and attitudes, as well as the cooperative and competitive nature of social interaction to others.

Self-construction is a crucial part of a person's psychological life in the sense that all self-related processes such as *self-presentation* and *impression management* contribute to "making" *the self*. Self-presentation and impression management are similar in portrayal of the image that is given to others. Self-presentation refers to the continuous strategic expression of the self [28], whereas impression management can be linked to situations where one is purposively aiming to influence others' thinking about him or her [14]. However, in practice, the terms are often used interchangeably.

When making decisions about what to disclose and when, individuals often struggle to reconcile opposing needs such as openness and autonomy [10]. Disclosure, identity, and temporality are cited as three boundaries that are central to the characterization of privacy management [20]. These boundaries reflect tensions between conflicting goals. Importantly, people actively aim to find a resolution to tensions, not just between people but, also, between their internally conflicting requirements. As research has shown, even the smallest cues in online environments play an important role in profile construction [7].

According to Stern [29], the possibilities for strategic self-presentation are vast online and people have more control over the impressions they give to others in online than in offline settings. Supported by social cognition research [11], Stern [29] clarifies that for young people the principal audience of self-presentation is most often themselves, even if the presentation is initially directed at others. Additionally, people tend to construct their ideal selves in online environments instead of their authentic selves, and thus they are vulnerable to situations wherein the discrepancy between these "selves" causes distress [7]. In Goffman's terms, this indicates that people need to prepare themselves backstage for the public before going onstage and presenting their public personas [9].

Music and Self-Presentation

Brown et al. [4] have shown that online music sharing challenges the existing social processes in CSCW. As we study a music-focused SNS, music needs to be taken into account as a feature that mediates self-presentation. Volda et al. [32] have characterized the linkage between music and online-shared music, noting that music is something people consider surprisingly intimate. Their interpretation included the notion of privacy that was central to the informants' use of iTunes.

As North and Hargreaves [18] emphasize, music listening is full of choices, and this variety of choices turns music listening into an identification tool for both self and others. Studies reveal that music is an important element in people's lives because it allows them to create an image of themselves for the outside world and satisfy their emotional

needs [19]. People tend to listen to music that reaffirms their current identities and use it in this way as a resource that allows them to organize their ongoing work of self-construction [6].

Rentfrow, McDonald, and Oldmeadow [23] suggest that music functions as an identity tool or a means of self-expression containing an array of stereotypes formed and utilized in contemporary culture. Additionally, according to studies by North and Hargreaves [16], young people hold clear normative expectations concerning the social consequences of following particular music styles: music functions as a “*badge of identity*” during adolescence. Adolescents tend to favor people who like music similar to what they like, though this does not mean they would directly dislike people who do not listen to similar music [16].

On the basis of previous research, we conclude that music offers an interesting context in which to study the impact of automated sharing of behavior information in CSCW. What happens when publishing of raw behavior data occurs in real time online? How does automation change self-presentation strategies online?

THE STUDY

Interviews

To explore the phenomenon of having a public profile in an SNS, we chose to use provocative statements as our interview items instead of regular questions. The statements were used to open a dialogue with the participants. Follow-up questions were then asked to pursue interesting paths of discussion, led by the participants. Questions about personal life were asked during the interview to obtain as deep an understanding as possible of users’ meaning-making and reasoning.

The statements utilized were the following:

“Everyone wants to show others online what they are listening to.”

“All the songs that I listen to fit well with my profile.”

“Scrobbling makes me happy.”

“I want others to know what music I listen to.”

“I can interpret what kind of person someone is if I know what that person’s scrobbling profile is like.”

“I feel like switching the scrobbler off quite often.”

“I never think about what the songs that I listen to look like in my public Last.fm profile.”

“Some people might get the wrong impression about me on the basis of my scrobbling profile.”

“The music I listen to does not tell others anything about me.”

“Some tracks resemble me more than others.”

The lengths of the interviews ranged from 30 minutes to one hour and 50 minutes. All interview quotes, as well as the statements presented in this paper, are translations of the original Finnish expressions into English. The first author conducted both the interviews and the analysis.

Participants

Twelve active Last.fm users were interviewed in depth in November 2009 – January 2010. We employed Last.fm’s search filters to identify members who would be suitable as participants in the study. The criteria for inclusion were fourfold: first, location as announced in the profile (Finland); second, age (17–21)¹; third, extension of the profile with the scrobbling feature; and, finally, recent music listening activity according to the profile (tracks listened to within the month preceding the selection date).

An inbox invitation to an interview was sent to, in total, 60 Last.fm users, and 21 of these indicated their availability. As a result of practical circumstances, the final number of participants interviewed came to 12 (seven women and five men). The age of the participants averaged 19 years and ranged from 17 to 21. Three of the women and one of the men were attending vocational school, while two women and three of the men reported being unemployed. Two of the women were studying at upper-secondary-school level, and one of the men was enrolled at a university.

All of the participants had a portable music player (an MP3 player), either integrated into their cellular phone or separate. The number of favorite bands varied from one to several. Three of the male participants created music, lyrics, or both. None of the participants was a professional musician.

All participants had friends on Last.fm, whether friends from offline settings, online friends, or friends who had been found via Last.fm who now were friends of the participants both online and offline. Two of the participants had become friends with each other via Last.fm, and both mentioned having other Last.fm-based friends as well. These friends were meeting each other in offline settings too.

Analysis

The study was conducted in the tradition of interpretative phenomenological analysis (IPA), originally developed in the field of psychology [26]. The method is considered to be particularly suitable for studying novel topics [26, 27]; hence, it was used to explore the novel environment of Last.fm in young adults’ lives.

The participants’ personal experiences of being Last.fm users were the focus of the study, and analysis focused on the reasoning and meaning-making that they applied to their own thinking and actions in this environment. Especially when experiences are controversial, people try to understand their selves, feelings, and behavior, no matter how complicated the explanations needed. There were several expressed contradictions in the participants’ meaning-making, so the themes we analyzed coalesced

¹ The biggest group of Last.fm users in Finland are the 18–27-year-olds [25]. However, we wanted to homogenize the user group by narrowing the age frame.

around these contradictions, via categorization, as guided by IPA [26]. The themes analyzed illustrate four dimensions that were present in all the interviews.

Limitations

The study had some limitations. First, the sampling of the participants was purposive in that only those who were willing to participate and lived close enough were interviewed. Second, we did not identify any dropout users, who might have experienced excessive challenges in managing disclosure during their use history. Finally, there are different ways to use Last.fm and we have focused solely on ones that employ scrobbling.

PROFILE WORK

We present the results of our analysis as interrelated dimensions describing the experience of using Last.fm. The umbrella concept combining all four dimensions is *profile work*.

We propose the concept of *profile work* for users' experience and action in SNSs as they make efforts to maintain and manage public profiles. Profile work is a combination of experience and action; it is a continuous, strategic process that is guided by the interpretations a user makes of her or his behavior and that of others. Goffman's concept of face work [9] is related to the phenomenon of profile work. However, while face work is a concept that has been used to describe online self-presentation, too, face work has traditionally been done in face-to-face contact whereas profile work is done via an online profile.

Profile work is closely related to the concepts of *photowork* [13] and *videowork* [12]; it encapsulates the connotation of effort that a user makes to achieve an intended goal and shows that there are elements related to self-presentation to take into account in the design of new systems. Profile work is relatively distant from Strauss's concept of *articulation work* [30]. Articulation work focuses on explicating the resources needed in "work," in, for instance, organizations. Meanwhile, profile work combines the work itself and the resources needed for it, but where only online profiles are concerned. To deepen the concept of profile work, also the "work" indicated by Volda et al. [32], is needed to manage online playlists, which contributes strongly to the privacy and publicness of a profile.

The excerpt below illustrates a shared feeling among the interviewees. The initial assumption was that there is something very private in musical tastes and that people feel vulnerable when their personal musical preferences are at issue.

K (woman, 20): [...] some of those younger friends that I've got, they are clearly somehow, even if they tell you that "this is what I listen to and this is what I like," they start to defend themselves somehow immediately, so I often start to feel like they are expecting everybody to attack them and start to bully them about it. I think it doesn't make any

sense at all. I think no embarrassing music exists at all. If you do like it.

The process of maintaining a profile demands a great deal of effort. Effort is not limited to moments of actively using Last.fm (when the user is logged in to the service); it extends also to times when the user is only passively using the service (that is, not logged in to it but still listening to music on a connected device). The four dimensions will be presented in detail in the following sections.

Profile As Product

In this study, the profile was considered to consist of the online-shared music listening information (OSMLI) and the avatar information (a profile picture and textual cues). The profile is a product for the owner of the profile but also for other users of the service. According to prior work [32], playlists shared online are managed and created to give a good impression to others. Here, three key elements point to the "productness" of a profile. First, the users utilized profiles as a way to express themselves to others, using the profile as a "bookshelf" type of construct. Second, the users were enjoying having pieces of their personal history in their profiles. Third, the users were "rewarded" for scrobbling by the system in the form of visualizations and statistics of their musical tastes (based on OSMLI) that they were able to show to others, too.

According to the data, a Last.fm profile could be seen as a product that has been created consciously and in mind of the fact that it will be public for audiences all around the world. The profile functions as a CV or bookshelf does: by looking at it, one can see what a user has been listening to and what kind of emphasis there might be on particular favorite artists or groups.

E (woman, 17): That is the way to tell somebody about myself; if that somebody asks that, I can just send a direct link to my profile on Last.fm.

As E explicates in the above extract, the profile is something that one can show to others intentionally. For example, E had made good "real" friends on Last.fm and she felt that it was relatively easy to introduce herself to others by providing a direct link to her profile there. The function of the profile was to show what she liked and how much and, thus, communicate her tastes to others. Using the profile to illustrate one's likes seemed to describe the data thoroughly, and we interpreted profile creation and maintenance as something that could be seen as a goal-driven, strategic behavior. The participants' behavior seemed goal-driven in that they held clear visions of what suits the profile and what does not. The strategy was to create and maintain a profile that holds an ideal self-presentation.

T (woman, 21): Sometimes you have certain bands that you want to have up there, so it's not cool to have something else there.

Considering the profile as a product requires a lot of effort. When you have a profile on Last.fm, you will automatically share a large body of information about yourself. In SNSs, self-presentation is usually conducted solely with the aid of the user's profile. This importance of the profile can be seen as a great challenge. For example, when participants wanted to listen to something that they felt embarrassed about, they faced a self-presentation problem (see "Conflicting Goals"). Figuring out a strategy to maintain the profile and then employing that strategy represented a continuous project for the users. In the following excerpt, S explains why she listens also to some tracks that do not "fit" her strategy:

S (woman, 20): I have memories of some songs that I've heard in special situations or something, so those you want to sometimes listen to, but you listen not because of the artist but because of those memories. So it's like that. 'Cause outsiders don't know why you listen to that; it's like "duh, I don't listen to that kind of stuff for real."

The OSMLI profile can be seen as a bookshelf in the sense that it carries not only social but also a great deal of personal value for its owner: The profile with its content presents a piece of personal history that is relatively easy to retrieve. When looking back at the OSMLI, users are able to see their favorite artists from different periods of time as statistics and charts. These illustrations were considered useful, as they provided a tangible visualization of one's musical tastes. The participants explained that the observation of one's own behavior was the most intriguing feature of OSMLI.

T (woman, 21): I'm waiting to break 40 K; it's now 33,000, almost 34,000, I think.

In the excerpt above, the participant estimates the number of listened-to tracks she has in her profile. This number functions as a key figure of a profile. Part of the site's culture is to have as large a number of listened-to tracks as possible. The actual music listening behavior was seen as something to use in *learning to know one's musical tastes* and, at the same time, in *learning to change one's musical tastes*. According to self-perception theory [2], people develop and become aware of their attitudes by observing their behavior and coming to a conclusion on what must have caused the observed behavior. That is, people assess their own behaviors similarly to how they assess others'. If the users could not identify with the recorded statistics shown in the service, they felt uncomfortable. On the other hand, when one of the participants had noticed from her profile that she had listened to very heavy music, she worked on having her OSMLI in balance by listening to "non-heavy" music. She did not consider herself to have such heavy musical tastes in reality, so her self-image was conflicting with the image produced from OSMLI, which differed from what she thought it was. She realized that she had listened to too much of something that was not in line with her strategy for maintaining the profile and, hence, felt a need to change her behavior.

Cycle of Interpretations

Previous research [20, 21, 29] suggests that people are able to form accurate impressions on the basis of other people's music preferences and link these to their personalities accordingly. In addition, music preferences can provide information different from that obtained in other situations in which people do not know each other yet [22]. People use the knowledge of others' online-shared playlists to get to know them better [32].

The cycle of interpretation functions on the basis of interpretations made of others and interpretations that others make of the subject. Some participants were sure they have the ability to interpret others' personalities on the basis of OSMLI. Such an assumption is in line with recent studies of ability to link musical preferences to personality traits [22]. The participants who said that they are able to make interpretations from such small-scale things as musical tastes were, however, aware that other people might be making large-scale (for instance, personality-related) interpretations of them. That caused some worry. Interpretations, whether negative or positive, were considered unfair and against the prevailing trend of trying not to be judgmental. In addition, the golden rule of treating others as one wishes to be treated characterized the dislike of interpretations.

Interestingly, it was common to refer to interpretations as judgments. An ideology of avoiding judgment characterized all the data:

K (woman, 20): Some younger people don't necessarily want everybody to be able to see all of what they listen to, so that they won't be judged over some stuff and so on.

However, while the interpretations were disliked or at least criticized on some level, the participants acknowledged that they always get some kind of image of another user's OSMLI – whether they want it or not.

K (woman, 20): Um, I don't know if it's allowed. Or you are allowed but I don't know if it makes that kind of right image, but I do interpret, or even if it goes wrong or something, I can't help it, if I see what they've been listening to and so on so I'll instantly get some kind of image to my head and so... Somehow I feel myself to be very racist.

Furthermore, when telling about these images that they intuitively formed, the participants explicated feelings of guilt and anxiety in making such categorizations. Evidently, some acts of listening were enforcing the ideal image while others were something to be ashamed of.

E (man, 20): I'm not that kind of music Nazi anymore that if you listen to Britney you'll die, or, er, it really doesn't matter.

OSMLI was actually considered more to be information than to be a description of taste in music – it was seen as authentic music listening behavior. In OSMLI, features such as detailed listening history and daily listening behavior were providing a large body of information to the audience "out there" as compared to a single piece of

information on musical preference such as the name of one's favorite band shown in a Facebook profile. In addition, the participants talked about their interpretations in terms of stereotypes, such as metal-head or punk, as reference points to illustrate their meaning-making.

Conflicting Goals

In publishing one's music listening information, the goal is not only to satisfy one's personal need for listening to music but also to consider the image that will be given to others in the form of OSMLI. These competing aspects lead to a conflict between personal desires and social norms.

From the perspective of personal desires, the following excerpt describes the connection between music and emotions in a very revealing manner:

A (man, 19): Somehow it feels like it is boiling in you and you feel like screaming and kicking things, and often in that kind of angry situation, the whole environment is so calm that it makes you even angrier, because you don't realize why it is so peaceful and calm around you, especially if there are no other people connected to the same situation, and you become angry suddenly when you remember something or get to know something and there is no reason the other people around you would be angry as well, just walking there on the streets. But somehow you feel that, why everything is so peaceful and quiet even... Even if you listen to it all alone [on headphones], it feels that it makes some sense somehow, because the sounds make it; there is some sense. Like this is the right feeling, that it's not so peaceful around me. A hard beat.

A's view on personal desires demonstrates that music served his personal goals, and, as an example, he was considering the music chosen for that specific situation private – he did not want his friends to know about it. What makes matters complicated is that he knew his friends would be able to guess that he was angry by looking at his OSMLI and he did not want them to see that, since he felt it was private.

According to North and Hargreaves [17], some people may feel that their favorite music arouses certain emotions, or they attribute their preference to memories with which they have associated the music. For some people, the reason to listen to certain music is simply that they “just like it” [17]. However, when music listening information becomes public, the social might take over.

An OSMLI profile forms an image that is shown to an audience. This image plays a significant role in presenting the self on Last.fm. It is noteworthy that some users were willing to make the effort of intentionally hiding some of their music listening information from others.

The participants emphasized that many of their actions on Last.fm were intentional, and, because the profile existed to be public, impression management required a great deal of effort. The following extract opens up what happens when H wants to listen to something that she is ashamed of:

H (woman, 21): Er, for example, a couple of songs of Antti

Tuisku² that I listen to secretly from my friends. Then I switch everything off. [gasps]

Interviewer: How do you feel if you think your friends could see in your Last.fm profile that you have now listened to one song of Antti Tuisku?

H: Well, I'd just say that I just wanted to do it. If they happened- if I happened to forget to switch it off someday, I'd just say it's my own business.

The extract illustrates the discussions captured in the data and especially the controversial goals of enjoying music privately and showing it socially.

In some cases, if a user liked listening to a song that she or he knew might be disfavored by others, she or he might not listen to this specific track at all. As another option, the user might listen to it but conceal it from others, by using mechanisms of *Profile Regulation*.

H (woman, 20): I mean, you know, that kind of more artistic people could possibly value those kinds of special things more than High School Musicals or that kind of rapper and that kind. So, I kind of try to sometimes- to get that some kind of indie style more. So that it could contain more those kinds of bands that are, that are more in the favor of that kind of people. I don't know why I think so [laughs], because it doesn't matter. I'm not that interested in the sense that if somebody has just listened to “Tokyo Hotel” – that I'm not like that, that “This is it!” or something.

The social norms that are subjectively interpreted from the environment (e.g., in Last.fm-environment OSMLI profiles) are social in nature, as the norms emerge socially in a specific context. These norms guide the strategies for producing ideal-self presentations in Last.fm, but so do the personal desires of the users. In this case, the participants contemplated choices between possible acts: “to scrobble” or “not to scrobble” and “to bother” or “not to bother” to listen to certain songs or artists privately.

In the following excerpt, E explains that there is a contradiction in her behavior:

E (woman, 17): Well, for example, I have said that I don't listen to Finnish music at all. However, I do listen to a rap artist called Skandaali sometimes.

Later in the interview, she explains that not listening to Finnish music is a kind of “*general opinion*” she has. This implies that when surrounded by a meaningful audience, she does not listen to anything “embarrassing,” even if she has a personal desire to do so. When she listens to the exception mentioned in the quote, she does not want to scrobble it.

The following excerpt extracts the social value that Last.fm holds for its users:

² Antti Tuisku is a Finnish pop singer and an Idols finalist. He is most popular among very young Finnish audiences.

S (woman, 20): And it's fun also because, in there, if random people are adding you as a friend and they have in some of their text something about that band, you know that they belong to a same group. And I can add them with no doubt. They have a real fan community there – it's like one big family. Everybody belongs to this big family.

Also, the participant stated that all of her closest friends are fans of the same band. The description “big family” that she used is a widely understood concept in Last.fm in the sense that you are able to show how much you like something and at the same time see how much others like it, too. The participants emphasized their belonging to this big family by communicating via OSMLI to the other members of the fan group that they share similar interests (see for more details on being a fan of music and social identity theory [1]). Additionally, Finnäs [8] found differences between the music preferences that young people stated publicly and those they privately endorsed. These tendencies were greater among those whose preferences deviated most from those of the majority. He interpreted these trends in terms of the subjects' confidence in their own beliefs about the preferences of the majority [8].

Profile Regulation

The cycle of interpretations guides the participants to do profile work in order to gain a satisfying result, such as balance between personal desires and social norms. Profile regulation is needed, first, in maintaining the selected strategy and, second, in changing the strategy. Maintenance of the selected strategy is intentional or conscious interpretation of what is suitable in the OSMLI profile and what is not, or what presents the ideal-self-presentation and what, in contrast, leads to a feared self-presentation (see “Profile As Product”).

Second, changing the strategy involves profile regulation. According to the participants, the system did not support changes in musical tastes – it took time for the charts to be changed by authentic listening. For example, one participant said that he still had Metallica as number-one band in the overall chart even though he had not listened to any Metallica in the previous two years. In this sense, the participant felt that the profile was not a correct image of his current musical tastes.

E (man, 20): Nowadays, I have it so I have it from a 12-month period. So if it was from a longer period it would be distorted, my musical tastes. Now I have it from 12 months.

Below, the four mechanisms of profile regulation (see Table 1) are presented one by one, from “lightest” to “hardest.” Switching the scrobber off is the most logical way to prevent others from seeing what you hear. However, it was considered cheating the system and being deceptive as to one's listening behavior. Since the other regulation mechanisms were seen as lighter and more acceptable means, they were used as substitutes for switching off the scrobber.

Type of Regulation	Description
Boosting charts artificially	Playing songs while not listening to them.
Dilution effect	Playing one “wrong” song and diluting it by playing several “good” songs.
Switching off the scrobber	Switching the scrobber off and listening to a song in private.
Resetting the profile	Deleting the whole listening history and getting a fresh start.

Table 1. Mechanisms of Profile Work in Last.fm

Boosting Charts Artificially

H (man, 19): Sometimes in the past, I tried to boost those, those artists there, so I just set them running and went away to catch something to eat or somewhere. I don't do it anymore.

“Boosting” a profile was seen as a light way to increase the number of listening times in the OSMLI. It refers to playing the song without listening to it. The OSMLI is not easy to manipulate manually, since the scrobbed tracks have to be produced one by one, as they are played in the music player. For instance, one participant said that often when he listens to an LP, he might have the computer playing the same track in MP3 format at the same time – for the sake of keeping the records straight.

Creation of a visible distinction between one's favorite bands and other artists was considered important. If a user wanted to listen to some other artists, she or he had to make sure the distinction remained visible. Furthermore, if the profile was considered to be outdated because the user's musical tastes had changed and the outdated favorites were still at the top of the charts, one solution for the user was to boost the new favorite bands in order to make the profile look representative. In the following excerpt, E describes how she feels about artificial boosting.

E (woman, 17): Some people do such that they leave the computer to do scrobbling when they go to bed. So, I don't do that. I consider it cheating.

Interviewer: How do you think they cheat?

E: Because the idea of Last.fm is to show other people what you listen to. You can't, you know. You can't just boost your charts artificially.

The quote illustrates how E thinks that it is not the intention of Last.fm to make users produce charts artificially and, in addition, that the artificiality of the behavior is cheating. This means that she compares her own behavior to others' and experiences inequality among the users. It is also

noteworthy that E obviously wishes others to produce OSMLI on a similar basis to that she herself applies.

The Dilution Effect

Another means of profile regulation was dilution. For instance, if one wanted to listen to something embarrassing without switching off the scrobbler, one could listen to some not-embarrassing tracks after the one embarrassing track in order to hide the embarrassing one, at least from the front page of one's profile.

H (woman, 20): I don't mind it in that sense. I listen to quite varied music, so people generally know that I listen to all that they consider to be low-level music, but yes, sometimes when I'm leaving the computer I might do so that there is an awful track there! I don't want to show that on the index page of my profile. Then I try to listen to as many as possible of some other tracks to make it disappear [laughs] when it is something a little bit embarrassing.

Additionally, in the following excerpt, S tells that she can listen to any embarrassing songs she wants to without switching the scrobbling off, because her OSMLI is so versatile that any song gets easily diluted in it.

S (woman, 20): So it has to be quite a weird song if it doesn't fit in there. There are so many different kinds of songs there that everything fits in there.

Switching Off the Scrobbler

One of the most logical ways to prevent anybody from seeing one's OSMLI is to switch off the scrobbler and prevent the recording of OSMLI entirely. Switching off the scrobbler was the move to make when the participant wanted to listen to something that she or he felt truly ashamed of. Switching off the scrobbler was always a conscious decision and a concrete act to prevent the OSMLI from being recorded.

According to the participants, the main determinant of switching the scrobbler off is maturity. This idea is supported by developmental psychology theories (e.g. [24]) on self-acceptance in growing up. Here, this means that the user might learn to accept her- or himself along with her or his personal desires.

T (woman, 21): If I have something that I want to have on that week's chart and I listen to, for example, Kake Randelin³, that is when I might switch it off. That is... that I don't want to have any "Nasta Pimu" song here. That is when I might switch it off, but not in other cases.

For T, switching the scrobbling off meant that she was about to listen to something embarrassing, something that she did not want to have in her profile. It was done to hide something. By contrast, in the excerpt below, H sees the

switching off as necessary in situations where her list of recently played tracks looks good, meaning that her favorite artists are well represented, and she does not want to impair her list with tracks that are not as meaningful. This can be seen as a way to leave the profile in good shape for the time during which she will not be listening to anything.

H (woman, 20): That I switch it off sometimes in the evenings, if I have a good-looking list up there, from which I can see what I've been listening to. Then I might switch it off to prevent any embarrassing tracks going there if I still wanna listen, especially those that I don't want to be there that much. Then I might switch it off.

Resetting the Profile

A very concrete mechanism to get a fresh start was to reset the entire user profile. Two of the participants reported having done so, although their reasons differed. In the first case, the participant wanted to change her nick (username) and the only way to do so was to create an entirely new profile. In the other case, in the excerpt below, J describes a different reason for resetting the profile:

J (man, 19): But then I've had those where I've reset my profile every now and then. In fact, last time I did it, I thought that it wasn't representative enough or because my musical tastes have changed. And for my own well-being, don't wanna see those artists there.

Interviewer: Now you have to explain what you mean by referring to your well-being?

J: Well, mostly when I've done it, you know, I was a teenager, and happened to think that the music is shit and I don't want it to be shown there. And if there has been a lot of that shit, I've reset the profile.

In the discussion, J refers to his age as a predictor for resetting the profile. When he was younger, he felt more insecure about his listening information and considered it easier to reboot his profile manually instead of having outdated favorite bands at the top of the listening charts. J uses the word "well-being" to describe how the tension that was previously caused by conflicting goals has now diminished as a consequence of resetting the profile.

However, J believes that he will not be resetting his profile in the future:

J (man, 19): [...] It's now that I've figured out how it can possibly serve me. Just like, that you can see or listen to, so it could be exciting, if it is still running in two years, to see what I've listened to at the end of winter 2010 or like that. You can connect with your memories and the like in that way.

DISCUSSION

The results of the present study challenge the notion "do not publish things that you want to keep private" when it comes to publishing behavior information. We argue that automated sharing increases the challenges related to

³ Kake Randelin is a well-known schlager singer in Finland. The typical fan of Randelin is a middle-aged Finn.

controlling self-presentation in Last.fm. As the online music listening information is shared with the public in real time independently of whether the user is logged in to the SNS, the disclosure can be seen as an at least partially inactive decision. Furthermore, publicness affects behavior to such a degree that, in order to manage their profiles, users sometimes do not listen to the music they actually would like to hear.

As the audience facing users of Last.fm was composed of both friends and strangers, the profiles were managed accordingly. For participants, the audience of the profile was what made the process of having a profile meaningful in the first place. They considered their music listening information very personal and felt that they were revealing themselves publicly by showing it online. Hence, having a representative profile was ultimately important. The self-presentation strategy was worked on constantly through the use of music listening information as a mediator of the self.

Our analysis showed that being a user of the service requires *profile work*. The effort the users put into maintaining their profiles has an inevitable effect on their actual listening behavior. We identified four mechanisms by which the users were regulating their profiles: boosting charts artificially, diluting tracks whose visibility was not desirable, switching off the scrobber to hide listening to particular songs, and resetting the profile. A user who chooses, however, not to use any of these mechanisms to regulate her or his profile is left with the option of not listening to those “embarrassing” songs at all. There is variation among users in how much and in what way they are willing to change their actual music listening behavior to maintain the intended impression in the eyes of others. This variation is a topic for further research.

In contrast to previous studies [4, 32], we have shown that the presentation of music preferences is important also in encounters with wider online audiences. It appears that automated sharing of listening information evokes behavioral changes more profound than those associated with playlist sharing, which appears as a fabrication process for social needs rather more than creation of a desired and considered self-presentation through continuous action. Interestingly enough, users commit themselves to tedious profile work instead of easy and “dishonest” methods available to them. However, it seems that the technological environment studied calls for continuous acting and reacting, not leaving much space for rehearsal or preparation of self-display.

CONCLUSIONS

Stern [29] has stated that self-presentation is easier to control in online environments than in offline settings. However, our results illustrate how more control goes hand in hand with more work. Furthermore, while automated sharing facilitates disclosure in an SNS, it also decreases users' control over their self-presentation. As a consequence of this decrease in control, the distinction

between backstage and stage wavers. Last.fm as an environment provides automated disclosure, which is not easy at all to control in front of the audience.

The need for control perceived and expressed by the users led us to contemplate possible means to facilitate users' profile work and aid them in expressing the meanings behind their behavior in Last.fm. All in all, the study has several implications for the design of services based on automated sharing. We suggest improving the possibilities for users to explain behavior as well as improving visualizations that illustrate change in musical tastes. For the former, the participants felt that it would be more convenient to comment on the “embarrassing” music they listened to and explain the specific reasons they wanted to listen to it than to hide or avoid the playing of the music in question. For the latter, the system as it stands did not support drastic changes in musical tastes and prevented the participants from showing their “current” ideal-self images to others. This problem could be diminished by offering the users charts that archive their past tastes in music while allowing them to showcase the new.

Our findings concerning how users deal with the sharing of behavior information and contemplation of how users' profile work can be supported in relation to automated sharing have relevance beyond the scope of music-focused services. While automated sharing of behavior information is still relatively rare in the field of SNSs, its popularity is rising, for instance, in the realm of location-aware services. It has been noted that studies of online privacy are needed since people feel insecure about being targets of spying (see [31]). Along parallel lines, understanding self-presentation in the context of automated sharing is essential. We stress the importance of enabling users to express and explain the meanings attached to their actions instead of merely disclosing behavior information.

The noteworthy finding that users were ready and willing to change their actual music listening behavior in order to present their ideal selves to others in an SNS illustrates the importance users place on profile work. Under certain circumstances, social underpinnings are strong enough to outweigh personal desires, even in the case of a highly personal matter such as music consumption.

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