

“This is a Throwaway Account”: Temporary Technical Identities and Perceptions of Anonymity in a Massive Online Community

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ABSTRACT

This paper explores temporary identities on social media platforms and individuals’ uses of these identities with respect to their perceptions of anonymity. Given the research on multiple profile maintenance, little research has examined the role that some social media platforms play in affording users with temporary identities. Further, most of the research on anonymity stops short of the concept of varying perceptions of anonymity. This paper builds on these research areas by describing the phenomenon of temporary “throwaway accounts” and their uses on reddit.com, a popular social news site. In addition to ethnographic trace analysis to examine the contexts in which throwaway accounts are adopted, this paper presents a predictive model that suggests that perceptions of anonymity significantly shape the potential uses of throwaway accounts and that women are much more likely to adopt temporary identities than men.

Author Keywords

Anonymity; multiple profile maintenance; reddit; throwaway account; selective self-presentation; social news sites

ACM Classification Keywords

H.5.3. Group and Organization Interfaces—Web-based Interaction

INTRODUCTION

Even though anonymity plays such a crucial role in the history of computer-mediated communication (CMC), online identity management remains a significant issue in the technology industry [19]. For example, Google’s initial decision to forbid anonymous accounts on the young Google+ social networking service led to a dramatic disturbance among its members, many of whom felt that anonymous profiles should be allowed [44].

However, some social media platforms have implemented

features that afford a variety of boundary management techniques for information disclosure or identity performance. These affordances play a key role in how some users negotiate identity boundaries through the creation of multiple accounts, such as in moments when someone does not want particular information linked to the primary representation of him- or herself. I call these types of accounts “temporary technical identities,” where the particular sociotechnical system affords an individual to create a provisional pseudonymous username. This paper explores one online platform, reddit.com, which permits users to create numerous accounts (under any pseudonym) easily, leading to the emergent phenomenon of “throwaway accounts.”

This paper explores the typology and uses of temporary technical identities within the sociotechnical and cultural context of reddit guided by two research questions:

RQ1: *How and in what contexts do social media users navigate boundary management around identity with particular affordances of some sociotechnical platforms?*

RQ2: *How do CMC factors, especially perceptions of anonymity, play into an individual’s potential use of a temporary technical identity?*

To investigate these questions, this paper draws from a dataset of self-identified throwaway accounts as well as a survey of reddit users to see how perceptions of anonymity, willingness to self-disclose, and the size of the imagined audience play into the potential adoption of temporary technical identities. The paper concludes with a discussion of multiple profile maintenance with respect to reddit’s peculiar community subculture and the implications of affordances for temporary identity creation toward the design of online communication platforms.

RELATED WORKS

This paper investigates the use of temporary technical identities at the intersection of a number of research areas: multiple profile maintenance; selective self-presentation and imagined audiences; and affordances for anonymity.

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CSCW '15, March 14 - 18 2015, Vancouver, BC, Canada

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ACM 978-1-4503-2922-4/15/03 \$15.00

<http://dx.doi.org/10.1145/2675133.2675175>

Multiple Profile Maintenance

Multiple profile maintenance (MPM) focuses on the practices and motivations of sustaining multiple alternate identity profiles within a communication service, platform, or technology. Some researchers have identified the use of multiple accounts as an emergent practice, particularly around boundary regulation and privacy management [40, 26, 50], though few look at platforms that purposefully afford multiple technical identities.

Other research has provided empirical insights into the use of multiple profiles. For example, Gross [17] examined the use of multiple email addresses and instant messenger screen names. Individuals described reasons for use from wanting multiple identifiers to regulating access to personal information based on work, family, and acquaintance boundaries. Stutzman & Hartzog [45] conducted a similar study of social network site users who maintained more than one profile on the same social media platform. They similarly found that privacy is the primary motivation for MPM, with identity, utility, and propriety in the range of secondary motivations. From interviews, they also constructed a spectrum of boundary regulation processes, fluctuating from pseudonymity (separate incognito and unlinked identities) to practical obscurity (separate visible identities) to transparent separation (separate public identities purposefully linked).

Selective Self-Presentation & Imagined Audiences

MPM involves boundary regulation within the context of particular user-audience relations. Selective self-presentation is an affordance of CMC where individuals can decide what information to share about themselves without the context of face-to-face interaction [48]. The prior literature [17, 45, 31] shows that people take into account each platform's varying audience dynamics when dealing with particular profile performances. Imagined audiences do impact real decisions to disclose, which are then displayed to the actual audience (though underestimating the size of this actual audience can be common [3]). For example, email communication is directed and more confidential, while communication on Twitter is sometimes more broadcast and accessible, so individuals employing MPM take into account the potential of the unknown, imagined, and unintended audiences to access information. Marwick & boyd [33] note that issues like context collapse (see also [8]) emerge from networked communication technology because expectations around information access are unexpectedly broken down by others accessing particular bits of communication meant for certain audiences, and some people will create multiple accounts to deal with the management of these fluctuating boundaries.

Some social media platforms differ from social network sites [11] in that they rely more on broad information sharing practices rather than the curation of personal information distributed to a select number of viewers (friends, followers, etc.). Online forums and newsgroups,

image boards, microblogs, video-game social hubs, and social news sites [30] provide systematic ways for users to communicate with other individuals without adhering to the "profile and friend list" format of social network sites.

Research on disclosure and selective self-presentation has rarely focused on social news sites, particularly within the "broadcast-to-all" context that this genre of website affords. Strategic self-presentation literature (e.g., [24]) has detailed the motivations that go into communication choices, but more recent scholarship has identified aspects of CMC situations specifically like non-identifiability (anonymity) and invisibility (from audiences) that create effects – for instance, the disinhibition effect – which lead to greater disclosure [46]. Joinson [21] especially identifies that disclosure increases with the combination of anonymity and private self-awareness, so people that use CMC are more likely to disclose when the risk is lower. Therefore, one may expect that individuals who are uncomfortable disclosing personal information would use multiple profiles, especially temporary ones.

H1: *People who are less willing to disclose personal information are more likely to use a temporary identity.*

Scholarship on the impact and influence of audiences on self-disclosure vary. Butler [5] posits that membership size and communication activity are opposing forces that unbalance resources and benefits for members within online social structures. Valacich et al. [48] asserts the opposite, saying that an increase in the group's size in anonymous CMC leads to increased productivity within the group. And from traditional psychology, research has shown that group size can determine the intensity of audience effects [28, 25, 27].

Voelpel et al. [51] found that the bystander effect in virtual communities – while theoretically predicted to negatively affect participation in these communities as group size increased – actually had a parallel, positive effect as group size approached large or very large. In other words, participation overall was high in very large groups (though they find that quality of content diminished). In a direct study of perceived audience on anonymous communication, Okdie [36] found the opposite: there was no relationship between bloggers' willingness to disclose personal information and their anonymity in the face of unknown audiences. In the context of social network sites, Vitak [49] found that audience size does impact disclosures (and other uses of affordances like privacy settings), though in a positive direction (opposite of what was expected).

Yun [55] studied perceptions of anonymity in relation to the perception of the size of the online community, and he found support for group size's effect on disclosure. Thus, perception of the imagined audience may impact people's information sharing behaviors. This paper takes the stance that if an individual perceives a large, unknown audience for their disclosure – especially if that audience could

include an acquaintance – then personal risk increases, and the individual would prefer to use a temporary identity to disclose information.

H2: *People are more likely to use a temporary identity in the face of larger perceived audiences.*

Affordances & Anonymity

While Stutzman & Hartzog [45] touch on temporary identities in MPM, their prior research does not explore in detail the affordance of some sociotechnical platforms allowing users to create temporary technical usernames in addition to their primary crafted identities. In relation to the MPM literature, then, it is not necessarily that these accounts are maintained as much as generated and cast away through convenience of the platform's affordances, making these accounts relatively anonymous.

Anonymity and pseudonymity play a key role in the technical production of identity in CMC, as anonymous communication usually is implemented through pseudonymous usernames. Some platforms even institute absolute anonymity, forcing individuals to adopt particular identity strategies and signals to make themselves memorable [5]. The affordance of creating *temporary* usernames can have adverse effects toward creating reliable reputation systems; as Resnick & Friedman [42] argue, "cheap pseudonyms" create distrust within a community, particularly around new participants. Conversely, the social identity model of deindividuation (SIDE) has shown that anonymity can increase the salience and success of collective identity [41]. This paper, though, takes an ambivalent position regarding the effect of anonymity on community dynamics, instead opting to show how different types of anonymity might affect individual information sharing behaviors.

While many scholars have focused on the impact of anonymity or pseudonymity on communication and – both positive and negative – behavior [20, 1, 6, 54, 47, 22, 35, 7], usually the research literature has used a dichotomized concept of anonymity (it is either "on" or "off," or people "have it" or don't). Few have taken the next step to examine how levels in the perception of anonymity change these behaviors. Some, such as Hayne & Rice [18] built on the dichotomy with assumptions like "partial anonymity." Notably, Joinson [21] and Qian & Scott [39] approached the issue with a basic perception-driven, scaled concept. Yun [55] also examined various aspects of perceived anonymity and concluded that "self anonymity" contributed the most to a total perception of anonymity (alongside "other anonymity" and "discursive anonymity"). In addition, all three scholars point to some increase in disclosure with the increase in anonymity.

Finally, regarding anonymous and pseudonymous profiles within the framework of MPM, Stutzman and Hartzog [45] note that users created multiple profiles under the guise of feeling anonymous because "[p]seudonymity both conceals

information and encourages disclosure... As a result of the disassociation with the primary identity, individuals can disclose with less reservation, knowing that the pseudonymous profile is 'invisible' to search engine queries on the individual's name, for example" (774). Therefore, I expect that temporary identities are more likely to be used when individuals feel less anonymous in the particular setting of their potential disclosure.

H3: *People are more likely to use a temporary identity in cases of lower perceived anonymity.*

METHOD & DATA

This paper employs a mixed methods approach to understanding the details and dynamics behind temporary technical identity practices. A temporary technical identity is defined as a username or other technical implementation of an individual's presence within a sociotechnical platform that the individual creates and then uses for a short time or only once to produce a strategic self-presentation. These accounts are not maintained and are kept distinct and separate from the individual's primary representation.

The paper first uses public data from self-identified throwaway accounts on reddit to describe the nature of reddit's non-persistent identity affordance and contextualize what I found with ethnographic observations from general site use and user conversations. Then, the paper examines the results of a survey of reddit users to examine the impact of perceptions of anonymity and selective self-presentation on the likelihood of a reddit user to use a temporary identity on the social news site.

The motivation to explore reddit stems from its current popularity and massive userbase; the ease of creating alternate identities; and the small amount of research about social news sites. Social news sites allow users to contribute links and posts that can be made visible by the community through the technical mechanisms of voting these posts up or down [15, 34, 29, 43]. The highest voted posts then reach the most visibility, usually the top of an aggregated page. Reddit's architecture is especially consequential for how people use the platform: because subreddits (specific topical communities) are created by anyone, they range in size, purpose, social norms, and levels of activity. The site curates "default" subreddits that all new contributors (and viewers without accounts) are subscribed to, so these particular subcommunities gain the most visibility within the platform. The potential audience for content shared in these default subreddits then exponentially increases compared to newer, smaller subreddits.

The primary alternate identity practice on reddit involves what are colloquially known as "throwaway accounts." Social media companies will sometimes embed a logic of multiple identities directly into their system (e.g., the ability to directly switch between multiple accounts); however, many platforms do not, and while they can afford broadcasting particular content to specific audiences [23],

they frequently discourage the use of multiple accounts (i.e., Facebook and Google+). Reddit, though, allows one-time-use accounts that are easily created by signing up only with a new username, password, and CAPTCHA (even an email address is not required). The site also explicitly encourages the use of throwaway accounts in their site FAQ¹. Because the “throwaway account” has become so well known within this community of practice, the ecosystem (including third-party, community-developed add-ons like the Reddit Enhancement Suite²) essentially warrants the frequent use of these multiple, temporary identities.

Study 1 uses a qualitative grounded theory approach [16] in participant observation to understand how users talk about the contexts for adopting temporary technical identities. These observations are also situated within 3 years of ethnographic participation across reddit’s various communities, where I spent time participating in a wide range of topical communities; talking casually on- and offline with ordinary users, moderators, and admins; and recording notes and screenshots. The conclusions are drawn from a trace ethnographic technique [14] in which self-identified throwaway accounts were curated and crawled for their contribution histories. These conversations and notes were reviewed, coded, and summarized, and they were synthesized with observations taken from the database of accounts and messages. Self-identified throwaway accounts were used for this study because of the difficulty of distinguishing throwaway accounts when nearly every username is pseudonymous and the ethical considerations of linking individuals’ primary accounts with any throwaway accounts they might possess.

To collect self-identified throwaway accounts, Python and MySQL were used to crawl reddit.com’s public API to search for mentions of the word “throwaway” in either post titles, post text, or usernames across the top 500 most-subscribed subreddit communities³ in the past year. In total, 15,469 messages were collected from 372 of the subreddits from 13,681 unique user accounts. There are many approaches that could be taken to identify throwaway accounts from the collected messages. Noted from an exploratory stage looking at 241 messages that explicitly mentioned, “This is a throwaway account,” 78.8% of the accounts – based on their contribution history – had posted only once, while 96.3% had posted 3 or fewer times. Therefore, to look further at the contexts of using throwaway accounts, all of the 13,681 accounts’ contribution histories were crawled, and a subsample of accounts was selected that had posted only once and whose comments were restricted to the same subreddit, resulting in 5,102 distinct accounts. While usernames that have posted only once do not account for all types of throwaway

accounts, they represent a notable sample of temporary technical identities on reddit.

Study 2 uses the results of a general survey of 113 reddit users conducted in April 2012. The survey participants were recruited on reddit.com’s /r/AskReddit subreddit (a default community to which all new accounts are subscribed) and self-selected into the study. All respondents had created at least one account on reddit and had at least one week of experience using the platform (months as a user, mean = 13.76, s.d. = 12.63). The participants ranged in age from 13 to 61 (mean = 21.81, s.d. = 6.65), with 46.0% of them identifying as female and 62.8% located within the United States.

The survey instrument was constructed using established scales from previous research, adapted for the current study. The survey was pilot tested (n = 39) to clarify question wording. Responses to all reddit-related questions referred to participation on reddit.com specifically and ranged on a 7-point Likert scale from Strongly Disagree (1) to Strongly Agree (7).

Perception of size of imagined audience. To measure the perception of the size of the imagined audience, the survey used a modified version of Yun’s [55] community size question to assess the size of the perceived community in an online forum (also readjusted on an exponential scale; “When a post on reddit reaches the top of a large subreddit (like r/AskReddit), how many users do you think will read the post?”) and converted to a log-transformed measure before analysis (mean = 5.363, s.d. = 1.053).

Perception of anonymity. The perception of anonymity was measured using Yun’s [55; p. 63] scale of perception of self-anonymity in an online forum. Eight items measured individuals’ perceptions of what other members of the community might know about some aspect of the individual’s personal identity or personality (“I feel that some members can... 1) recognize my username, 2) recognize my name, 3) tell my profession,” etc.). The scale was modified to include 6 of the items ($\alpha = .734$): each item was measured on the 7-point Likert scale, and they were summed into an aggregated score representing perception of anonymity (on a scale of 0 to 36, representing low to high anonymity; mean = 8.559, s.d. = 7.051).

Selective self-presentation. The estimate of selective self-presentation was measured using one scale, adapted from Yun’s [55] online public disclosure scale: 8 items measuring an individual’s willingness to contribute certain information to an online community and concern about the information’s reception (“I am willing to talk about my shameful experiences in this online community,” “I am willing to talk about my hurt feelings in this online community,” etc.). This scale ($\alpha = .918$) was measured on the 7-point Likert scale and was summed into an aggregated score representing willing to disclosure private information

¹ <http://us.reddit.com/wiki/faq>

² <http://redditenhancementsuite.com/>

³ For a list, see <http://www.redditlist.com/>

(on a scale of 0 to 48, representing low to high willingness to disclose; mean = 25.5, s.d. = 11.061).

Use of a throwaway account was measured with a Yes/No question asking if the individual had ever created and used a throwaway account.

Control variables. Four additional variables that are likely to influence perception of anonymity and willingness to disclose were considered as controls: gender, age, location, and time as a reddit.com user. Gender was considered as a control variable given gender differences on self-disclosure and privacy [13] and was assessed through one demographic question. Age and Location were also included; both were assessed through individual demographic questions. Months as a Reddit User was included given that users acclimate to certain social norms given ample time [52, 12, 55]. Time spent was assessed through one introductory survey question.

RESULTS

Study 1

Study 1 was conducted to establish an understanding of practices and contexts for throwaway account adoption on reddit.com. This section examines 5,102 curated accounts that mentioned “throwaway” and had only posted once in their entire contribution history (from 203 of the top 500 subreddits). Below, the paper presents three themes from observations of contexts and stated reasons for use of temporary technical identities.

Disclosure of personal information

Though each of the top 500 subreddits was queried for mentions of “throwaway” accounts, a particular subset of communities returned hundreds of messages each, while two-fifths did not return any results. The vast majority of the five thousands accounts posted to subreddits related to relationships, sex, gender, confessions, or general question-asking in order to tell personal stories, ask for advice, and receive feedback on particular questions or issues. Use in these subreddits illustrates that temporary usernames have become commonplace in discussion communities where the individuals frequently share personal information. For example, in a health and exercise community, a user writes, “I just wanted to know if this sort of thing is normal and what the causes may be. I hope this will be taken seriously. Obvious throwaway.” In a confession and complaint subreddit, another user explains about a depressed friend, “What I'm looking for is a wake me up call, please someone just tell me the harsh wake up call I need so I can be a better person and be there for her without feeling like it's a chore.”

When a throwaway account posted to a subreddit where throwaways were uncommon, they still tended to be sharing personal information around a particular issue in which feedback was solicited from the specific community. Sometimes people use these accounts to post information that individuals find controversial and therefore don't want

connected to their main accounts on the site. For instance, in a niche financial subreddit, one user explains, “These companies have very strict policies about sharing earnings, so I've made a throwaway and censored all personal details.” In another small, location-based community, a second individual asks for advice, writing, “(throwaway, of course, for fear of looking like a stupid idiot).”

Widespread adoption & “obviousness”

Whether individuals make their uses explicit or not, throwaway accounts pervade reddit. Still, it was surprising to find that at least 1 in 10 of the throwaway accounts in our sample mentioned that using a temporary account was “obvious.” There are many instances of this, such as, “Using a throwaway for this post for obvious reasons,” “Sorry for the obvious throwaway, but I'll try to keep it short. I hope to get some advice from y'all,” or “I'm a 15 year old guy, and this is obviously a throwaway.” After disclosing the “obvious” use of the throwaway account, each individual usually then wrote a lengthy explanation of a personal or controversial situation that they posed to the respective community for feedback.

Given their widespread use, throwaway accounts also manifest across different types of adoptive practices. As mentioned above, reddit's FAQ emphasizes the use of throwaway accounts, but the actual practice of their implementation can vary. Of the accounts I discovered that self-identified, 2,084 (40.8%) of the accounts included the word “throwaway” within the username, marking them as temporary identities even if the contributed message does mention the nature of the account. And as stated in the methods section, it can be difficult to categorize a throwaway as a temporary technical identity, given that “temporary” could mean only once or a short but still bounded period of time. For example, in our observation of throwaway account uses, some accounts labeled with “throwaway” in the username were merely used as additional – but sustained – pseudonymous accounts, such as for pornographic subreddits, which suggests that some members of the community have adopted the term “throwaway” as a marker for some degree of further anonymity. The ubiquitous character of throwaway accounts within reddit's ecosystem means that the everyday meanings of participants shape throwaway account use in different ways, though – as explained in the next section – throwaways appear to be adopted primarily to further distinguish accounts that the individual would rather remain anonymous to some larger degree.

Privacy & boundary management

As the literature reviewed above illustrates, individuals that engage in MPM do so in large part to maintain strict boundaries between social circles in order to share information to any particular one but not others. In the case of the throwaway accounts in this sample, a similar dynamic emerges, but instead of boundaries between particular groups of acquaintances, the line is drawn

	Exp(β)	SE	Z	P
<i>Intercept</i>	1.674	1.878	0.274	
Gender (0: Male, 1: Female)	2.634	0.470	2.061	*
Age	1.028	0.047	0.589	
Country (0: USA, 1: not-USA)	2.433	0.476	1.866	.
Months as a Reddit User	1.040	0.022	1.780	.
Willingness to Publicly Disclose (<i>H1</i>)	1.008	0.020	0.429	
Perception of Audience Size (<i>H2</i>)	0.925	0.228	-0.343	
Perception of Anonymity (<i>H3</i>)	0.901	0.036	-2.860	**

Significance: . p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

N: 113

McFadden Pseudo-R²: 0.278

AIC: 139.67

ROC Area Under Curve: 0.785

Table 1. Results of a logistic regression model predicting the likelihood of a reddit user using a throwaway account.

between the individual and one or more specific contacts, whom the information should never reach. In particular, a distinct separation is made between the contributing individual's primary reddit account and the throwaway account, removing any trace of the contributed information from the primary account (and thus resisting the permanence and searchability of this data).

Some people explicitly state the groups they are distancing themselves from in the use of a throwaway account. For example, one individual names fellow students and writes, "Using a throwaway, because I'm deep within the Bible Belt and some of my more narrow-minded classmates use this site." A second person mentions a parent: "[T]hrowaway because I want no karma and just some advice from the wisest people I know, also because my mother knows I reddit and I don't want her finding this out." Another explains, generally, "This is a throwaway account because there's some personal stuff in here that I wouldn't want traced back to me."

In particular, participants mention the use of a sustained reddit account that they do not want the information they are contributing linked to their primary technical identity. One person clarifies, "I would like to build a PC for my girlfriend and give it to her for Christmas. ... I'm using a throwaway since she knows my primary account name." Other individuals refer to a "real" account that embodies their day-to-day activities, such as, "Want to start by saying this is a throwaway account, created only to tell this. I have a real account, but I do not wish to use that one here. Sorry," or "Throwaway because my crazy ex knows my real account."

For some members, it is not an issue with particular information but with the type of communication, like complaining: "I don't want this sort of relationship drama on my primary account." One person even explains that she does not want to be reminded of the information she is

asking advice about: "i apologize for the wall of text and the throwaway, but i can't deal with having this on my main account. after being in very intensive therapy for a while, i've learned how to cope and get over a lot of things, but this doesn't seem to be one of them. [sic]"

All of these reactions fall in line with Stutzman and Hartzog [45] who found that individuals maintained multiple, sustained profiles to separate distinct spheres of their lives. However, temporary identities like throwaways allow the user to avoid issues like context collapse and unexpected audiences that might still occur if an unintended individual were to come across one of the maintained profiles (eg., employer gaining access to a personal account), even if effort was made to separate these spheres.

Study 2

Study 1 provided insight into the contexts that necessitate the use of throwaway accounts on reddit, especially within situations where others can identify you and what you are willing to disclose. In Study 2, I use a predictive model to look at factors that might affect adoption of throwaway accounts on reddit. To test the hypotheses outlined above, I ran a logistic regression to predict the likelihood of an individual to create a throwaway account, using three independent variables (willingness to disclose, perception of audience size, and perception of anonymity) and four control variables (gender, age, country, and months as a user). The results are summarized in Table 1 above.

Hypothesis 1 stated that people who are less willing to disclose personal information (ie., select self-presentation increases) are more likely to use a temporary identity. The relationship was not significant, and therefore H1 was not supported.

Hypothesis 2 stated that people would be more likely to use a temporary identity in the face of larger perceived audiences. The relationship was not significant, and H2 was not supported.

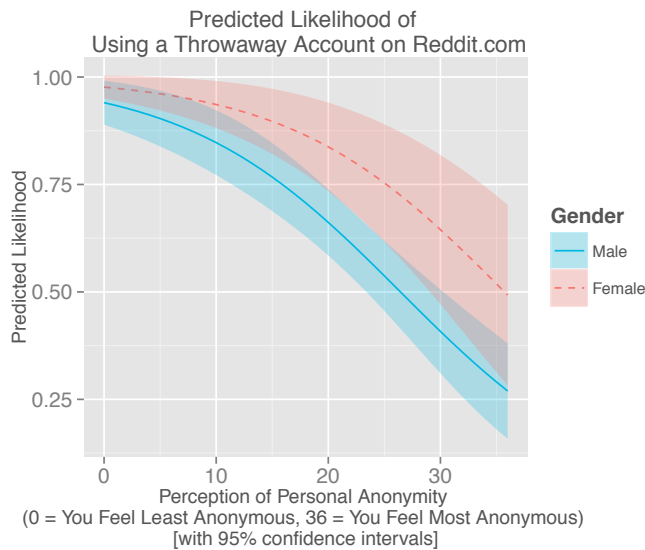


Figure 1. Summary of the significant results (perception of anonymity and gender) from the logistic regression model predicting throwaway account use on reddit (holding all other variables at their means).

Finally, Hypothesis 3 stated that in cases of lower perceived anonymity people are more likely to use a temporary identity. The relationship was significant, so this hypothesis was supported: a one-unit increase in the anonymity perception scale (ie., feeling more anonymous) results in a 9.9% decrease in likelihood of using a throwaway account (controlling for all other variables).

According to the model, the control variable of gender produced an additional significant effect. Compared to men, women are 154% more likely to use a throwaway account (controlling for all other variables). I discuss this additional finding below. Both of the significant findings are illustrated in Figure 1.

DISCUSSION

This paper provides an overview of temporary technical identities, an exploration of their use on reddit.com, and a predictive model that highlights the importance of perceptions of anonymity and gender in the creation of multiple profiles in sociotechnical systems. The first study shows how throwaway accounts on reddit enable people to disclose personal or controversial information in a quick and convenient manner without consequences tied back to their primary identity on the site. It also demonstrates generally how throwaways are used for momentary disclosure rather than act as sustained profiles for multiple purposes, as well as how pervasive throwaway accounts have become on reddit to the point of “obvious”-ness. The second study illustrates how perceptions of anonymity significantly frame the use of throwaway accounts, in addition to the impact that the gender of the person has on creating temporary identities.

Affordances for Profile Maintenance

Because reddit in its most basic form is a text-based forum, participants must navigate a significant lack of communication cues. As the literature points out, sometimes pseudonyms can complicate community dynamics like reputation and trust. Yet throwaway accounts afford individuals to smoothly disclose information separate from their main accounts, and the community has adapted to their widespread use.

Reddit’s various communities still occasionally encounter issues with throwaways. For example, Bergstrom [2] illustrates the emergent norm of contacting a community’s moderator to verify particular accounts’ contributions, when throwaway accounts were initially embraced within the reddit community. While moderators police much of the low-level information that makes it through to the larger audience of reddit.com readers, ordinary members must still rely on posters’ cues and trust in their personal statements and stories, so verifications of identities do help reduce uncertainty and increase trust in these communities (such as the /r/IAmA question-asking subcommunity). Still, throwaways afford benefits to many people, particularly in the separation of particular information from their main identity representation, providing them opportunities still to post personal information without repercussions from being identified.

As far as being an affordance for identity management, throwaway accounts also come with some difficulties. For instance, ethnographic observations produced some instances where the posters stated they were not going to use a throwaway. For example, “I usually break out my throwaway for this sub, but I really don’t care this time.” Sometimes the decision seems arbitrary, while in other circumstances, the use exhibits more-critical situations like safety and personal risk: “I am very nervous writing this, I was considering using a throwaway account since I live in the middle east but I decided against it.” The perception of the audience particularly plays into the decision making process. For example, one user actually expressed the hope that eventually some acquaintance would come across the posted message: “I’m not using a throwaway because I kinda want people to know this happened, but I’m nervous about telling them explicitly... [I]f you read this and you know me, or think you might know me, I would really love it if you came to me and addressed this.” Others merely feel comfortable expressing personal information or confessions, such as one person who wrote, “This is not a throwaway. I’m accepting of my shame.” These personal debates tend to point to a willingness to disclose personal information whether or not the disclosed information can be tied back to the individual’s primary identity. Future research could examine how catharsis plays into the motivation to use (or not use) temporary technical identities. For instance, one study has shown that the use of throwaway accounts in the context of mental health disclosures can result in individuals’ “decreased feelings of

vulnerability and increased self-disclosure” (p. 8) as well as responses from other users that were more emotional [9].

Anonymity and Temporary Technical Identities

Study 2 also highlights the importance of the role of perceptions of anonymity within the context of identity performance and self-disclosure. The model suggests a strong relationship between individuals that have both created throwaway accounts and reported lower perceptions of anonymity. Based on individuals’ self-reports, willingness to disclose and awareness of imagined audience size seem unlikely to explain adoption of throwaway accounts. In total, the results suggest that being identifiable has more impact on using a temporary technical identity than what you say or to how many people you say it. These findings seem to complement the ethnographic observations from Study 1, in that users expressed more concern with particular individuals discovering their disclosed information than a larger audience of unidentified others reading the information that was disclosed or any hesitancy to share it in the first place.

With respect to the literature of MPM, the issue of privacy from very particular audiences again seems to be core to the use of multiple profiles. Individuals may be willing to share any particular type of information, but one specific piece shared with one specific person may compel them to selectively self-present with afforded identity mechanisms. Temporary account adoption linked to perceptions of anonymity also has implications for theories of context collapse [33, 8], which currently does not preempt interactions with specific individuals around contentious information (instead depending primarily on post-hoc anecdotes). These results have particular design consequences for online communities, especially those that deal in the exchange of controversial or personal information. Designers might consider affordances that allow moments of anonymity for public-facing comments that still allow the individual to control the traces they make public (rather than consistently switching between multiple technical identities).

The impact of gender particularly stands out in the results, given its large effect size. The community that drives reddit heavily skews male [37], and the dominant culture that thrives within the platform reflects that population [56]. Prior research in online anonymity and gender point to a lack of equality amongst genders (e.g., [38]), and even Stutzman and Hartzog [45] suggest that some women use multiple profile maintenance to counteract gender stereotypes. As one of their interview participants stated, “I guess as a woman you kind of want to be gender neutral because it used to be that you had to be careful going online, because if you were a woman you would be the subject of all kinds of either stalking or spamming or, just, you know, its just not pleasant” (773). In particular, Flanagin et al. [11] found that, in CMC group contexts, women are more likely than men to use strategies to keep

cues reduced in anonymous online contexts (while men “introduce those cues into CMC to regain an interactional advantage lost through anonymity,” p. 82).

In addition to safety, privacy, and comfort with disclosure, female reddit users may use throwaway accounts more often than men because of the distinct male-centric culture that pervades reddit’s various communities. Massanari [35] identifies that reddit’s community participants engage in complex debates to solidify social norms within the community, but discourse frequently clashes with participation of other users. For example, in my ethnographic observations, the subreddit /r/ABraThatFits – for women to talk about proper bra sizing – has had to debate issues of identity and anonymity given that some male users have exploited the subcommunity for sexual purposes. Earlier in 2013, one moderator posted, “[I]f you do not want creepers to stalk your account, please, USE A THROWAWAY. We cannot stop them from sending you PMs. Some women do not mind the creepy PMs, they can just ignore them, but if you think that kind of thing will get under your skin do not use your main account when posting here.”⁴ The emphasis on using temporary accounts to evade privacy issues and avoid sexual stalkers points to the adoption of throwaways not for identity performance but specifically to reduce interaction with repulsive and detrimental participants in the larger community. While this example represents an acute instance of consequential boundary regulation, it still falls in line with our observations of the convenient nature of temporary identities to continue participating on the platform.

Limitations

Three limitations to this study of temporary technical identities could be noted. First, as noted before, the identification of throwaway accounts is difficult when the user does not make it explicit, and ethical concerns remain regarding linking these accounts to individuals’ primary identities. Interviews, in addition to the ethnographic observations presented here, could help illuminate the motivations and other factors that go into the adoption of throwaway accounts. Future research could employ better sampling techniques to map out the full range of temporary technical identity practices.

Second, as with most surveys, self-reported data and respondents’ recollection of past behaviors may affect the generated data. In a post-hoc simulation of statistical power, while H3 was strong, H1 and H2 showed lack of power to detect their small effects given the sample size. Still, the survey measures used might require more specific items rather than general questions about throwaway account use that encompass every situation. Some survey measures, such as willingness to disclose information,

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http://www.reddit.com/r/ABraThatFits/comments/1bg186/mod_post_not_a_n_aprils_fool_joke_i_just_have_bad/

measured a scale based on recollection, and future research could improve on this study by examining motivations in the moment before the creation of a temporary identity. Other factors like perception of anonymity or audience size could be affected by similar temporal and perceptual dynamics. For the purpose of this study, though, these initial measures allow us to view their impact at a general, high level given individuals' participation on reddit as a whole.

And third, the results found in this study may not necessarily be generalizable to other platforms. The findings found in Study 1 about the contexts when individuals adopt temporary throwaway accounts of course can occur in many different online environments (though these platforms might not on a technical level let participants create additional accounts). Also, I found similar results related to anonymity and gender as other research papers have reported. Still, the social norms and community dynamics of reddit may inflect how well particular results in this study could translate to other online environments and user practices.

CONCLUSION

While the technology industry has pushed in recent years toward identifiable technical representations of individuals, throwaway accounts – and temporary technical identities broadly – afford people who use online communication to disclose particular information without repercussions of being limited to only a single account. By examining throwaway account usage and describing factors that impact their adoption, this paper shows how the use of multiple profiles goes beyond maintenance of sustained technical identities when particular social media platforms afford such opportunities. Given the beneficial nature of these accounts, especially for those individuals who tend to feel less anonymous in particular situations, designers should consider alternatives to permit these identity performances within their own systems.

ACKNOWLEDGMENTS

The author would like to thank Josh Clark, Dennis Wixon, Peter Monge, Brian Keegan, Nick Jackson, Dmitri Williams, and Peggy McLaughlin for their feedback on early drafts of this paper, as well as the anonymous reviewers who provided amazingly detailed feedback and questions during the review process. This research was supported by a USC Annenberg Graduate Fellowship.

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