CS 6474/CS 4803 Social Computing:
Social Computing Theories: Identity

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"What's in a name? That which we call a rose By any other name would smell as sweet."

In Romeo and Juliet (II, ii, 1-2), Juliet tells Romeo that a name is an artificial and meaningless convention, and that she loves the person who is called "Montague", not the Montague name and not the Montague family.

Identity and Deception in the Virtual Community

Summary

- Identity in the Usenet environment (newsgroups).

- Models of honesty and deception
  - Assessment signals: They are costly and the cost is directly related to the trait being advertised.
    - Stag's horns
  - Conventional signals: Here, the signal is correlated with a trait is by custom or convention: the sender need not possess the trait in order to make the signal.
    - Powerlifter tshirt

- Assessment signals are reliable, since sending an assessment signal requires that the sender possess the relevant trait.

- Conventional signals are not reliable.

- Identity in voice and signal.

- "Signatures" to indicate identity.

Did you come up with interesting examples of conventional and assessment signals? [Ex. Online dating sites]

Class Exercise 1a

Class Exercise 1b

Class Exercise 1c

4chan and /b/: An Analysis of Anonymity and Ephemerality in a Large Online Community

What is anonymity?

- Security researchers define anonymity as unidentifiability "within a set of subjects".

- In sociology, Gary Marx's analysis: *being anonymous means a person cannot be identified according to any of seven dimensions of identity knowledge, that is, the person's legal name, location, pseudonyms that can be linked to the person's legal name or location, pseudonyms that cannot be linked to specific identity information but that provide other clues to identity, revealing patterns of behavior, membership in a social group, or information, items, or skills that indicate personal characteristics.*

4chan and /b/

- An English-language imageboard website.

- Users generally post anonymously, with the most recent posts appearing above the rest.

- 4chan is split into various boards with their own specific content and guidelines.

- Registration is not possible

- /b/ permits discussion and posting of any sort of content

- /b/ is the only board in 4chan where anyone can post grotesque material.

- /b/ is among the boards on 4chan which has a NSFW designation

Summary

- Study of 4chan's /b/
- Contributions:
  - Dominated by playful exchanges of images and links
  - Most threads spend just five seconds on the first page and less than five minutes on the site before expiring
  - 90% of posts are made by fully anonymous users, with other identity signals adopted and discarded at will

/b/ users also adopt various textual, linguistic, and visual cues to signal social status, e.g., in-dialect writing (/b/ slangs) serves as an entry-level signal of membership and status.

What other methods are adopted in other communities for the same?

Do you see such signaling only in anonymous sites?

Why do people seek anonymity online?

[People are rarely anonymous in the offline world, unless they are a criminal or a CIA agent!]

Why Do People Seek Anonymity on the Internet? Informing Policy and Design

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ABSTRACT

In this research we set out to discover why and how people seek anonymity in their online interactions. Our goal is to inform policy and the design of future Internet architecture and applications. We interviewed 44 people from America, Asia, Europe, and Africa who had sought anonymity and asked them about their experiences. A key finding of our research is the very large variation in interviewees' past experiences and life situations leading them to seek anonymity, and how they tried to achieve it. Our results suggest implications for the design of online communities, challenges for policy, and ways to improve anonymity tools and educate users about the different routes and threats to anonymity on the Internet.

literature that exists mainly derives from studies of one or a few online communities or activities (e.g., the study of 4chan in [5]). We lack a full understanding of the real life circumstances surrounding people's experiences of seeking anonymity and their feelings about the tradeoffs between anonymity and identifiability. A main purpose of the research reported here was to learn more about how people think about online anonymity and why they seek it. More specifically, we wanted to capture a broad slice of user activities and experiences from people who have actually sought anonymity, to investigate their experiences, and to understand their attitudes about anonymous and identified communication.

Another purpose of this research was to understand the

Why do people seek anonymity online?

Category	Advantages of being anonymous	Advantages of being identified
Social connections	Avoid disliked others Avoid commitment to the community Lower barrier to new relationships Protect others one cares about	Connect to real life friends Have stronger social connections Encourages more participation
Reputation and trust	Give honest rating/ recommendation	Good for reputation building Gain trust from other users
Image building	Have control over personal image Avoid embarrassment /judgment /criticism	Avoid harsh criticism Consistent with self-image
Emotional benefit	Feel relax and comfortable Feel cool and sophisticated	Feel real, integrated Feel closer to people
Express opinion	Feel free to express views	Avoid irresponsible behavior
Privacy	Have more control over personal information disclosure	Look innocent
Security	Protect personal safety Avoid legal repercussion/spam/stalk/lost of property	Hide in the crowd
Ease of use	Saves effort to log in	Easy to remember account

Table 2. Perceived tradeoffs of being anonymous vs. being identified

Kang et al. 2013

There are also consequences of different identity choices…

Class Activity 2

The Secret Life of Online Moms:
Anonymity and Disinhibition on YouBeMom.com

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Abstract

Moms are one of the fastest growing demographics online. While much is known about where they spend their time, little is known about how they spend it. Using a dataset of over 51 million posts and comments from the website YouBeMom.com, this paper explores what kinds of topics moms talk about when they are not constrained by norms and expectations of face-to-face culture. Results show that almost 5% of posts are about *dh*, or "dear husband," but these posts tend to express more negative emotion than other posts. The average post is only 124 characters long and family and daily life are common categories of posting. This suggests that YouBeMom is used as a fast-paced social outlet that may not be available to moms in other parts of their lives. This work concludes with a discussion of anonymity and disinhibition and puts forth a new provocation that moms, too, spend time online "for the lulz."

Prior work has examined how moms seek health information and social support online (Plantin and Daneback 2009; Sarkadi and Bremberg 2005). Related work has also studied the role of the Internet in family life (Boneva et al. 2004; Kraut et al. 2002; Mesch 2006). Though motherhood and the culture of information sharing has been studied extensively in offline settings (e.g. Scott, Brady, and Glynn 2001), less work has focused on how moms spend their time online. This is an important demographic to study. One-third of all bloggers are moms, older moms are one of the fastest growing demographics on Facebook, and younger moms are 85% more likely to visit Facebook than the average user (Nielsen 2009).

In some posts, **dh** is used in an affectionate way that implies that the husband is in fact dear to the poster. For others, **dh** is used cynically, often in the context of a deeply sarcastic or angry post:

*"If your **dh** treated you badly during your high risk pg [pregnancy], and got into a fight at the hospital after **db** was born, didn't show up the next day, would that be enough for you to divorce?"*

Many posts about **dh** on YBM are like this one, asking questions of community members and posting short vignettes about an private event in their life that is likely to elicit a response.

An interesting case of online anonymity: "*for the lulz*"

- Coleman argued that Anonymous (a prominent board on 4chan) is in it for the "lulz", employing rowdy, subversive tactics to fight for digital rights and civil liberties online (Coleman 2012)

- Benkler similarly describes Anonymous as "an idea, a zeitgeist, coupled with a set of social and technical practices. Diffuse and leaderless, its driving force is 'lulz'—irreverence, playfulness, and spectacle" (Benkler 2012)

Schoenebeck 2014

An interesting case of online anonymity: "*for the lulz*"

- Some of the posts on YBM are obviously playful and irreverent: *"I came home from work early and caught dh having sex with the Au Pair in our wine cellar. Should I be concerned?"*

- These kinds of posts parody the middle to upper-class woes performed by many YBM users, despite being a different demographic compared to 4chan and Anonymous.

- They also highlight a collective sense of humor and critique centered on the lives of moms.

Schoenebeck 2014

Is anonymity a binary attribute?

Whisper

- Whisper was a mobile app that allowed users to post and reply to public messages on top of an image (e.g. Internet memes), all using anonymous user identifiers.

- Whisper did not associate any personal identifiable information with user IDs, does not archive any user history, and does not support persistent social links between users

The Many Shades of Anonymity:
Characterizing Anonymous Social Media Content

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Abstract

Recently, there has been a significant increase in the popularity of anonymous social media sites like Whisper and Secret. Unlike traditional social media sites like Facebook and Twitter, posts on anonymous social media sites are not associated with well-defined user identities or profiles. In this study, our goals are two-fold: (i) to understand the nature (sensitivity, types) of content posted on anonymous social media sites and (ii) to investigate the differences between content posted on anonymous and non-anonymous social media sites like Twitter. To this end, we gather and analyze extensive content traces from Whisper (anonymous) and Twitter (non-anonymous) social media sites. We introduce the notion of *anonymity sensitivity* of a social media post, which captures the extent to which users think the post should be anonymous. We also propose a human annotator based methodology to measure the same for Whisper and Twitter posts. Our analysis reveals that anonymity sensitivity of most whispers (unlike tweets) is not binary. Instead, most whispers exhibit

While anonymous online forums have been in existence since the early days of the Internet, in the past, such forums were often devoted to certain sensitive topics or issues. In addition, its user population was relatively small and limited to technically sophisticated users with specific concerns or requirements to be anonymous. On the other hand, anonymous social media sites like Whisper[1] and Secret[2] provide a generic and easy-to-use platform for lay users to post their thoughts in relative anonymity. Thus, the advent and rapidly growing adoption of these sites provide us with an opportunity for the first time to investigate how large user populations make use of an anonymous public platform to post content.

In this paper, our goal is to better understand the characteristics of *content* posted on anonymous social media sites. Specifically, we introduce the notion of *anonymity sensitivity* to measure the sensitivity of content posted on such sites. Intuitively, anonymity sensitivity of a message cap-

Anonymity sensitivity

- Older users are more anonymity sensitive than younger ones.
- College educated users are more (statistically significant) anonymity sensitive than non-college educated users.
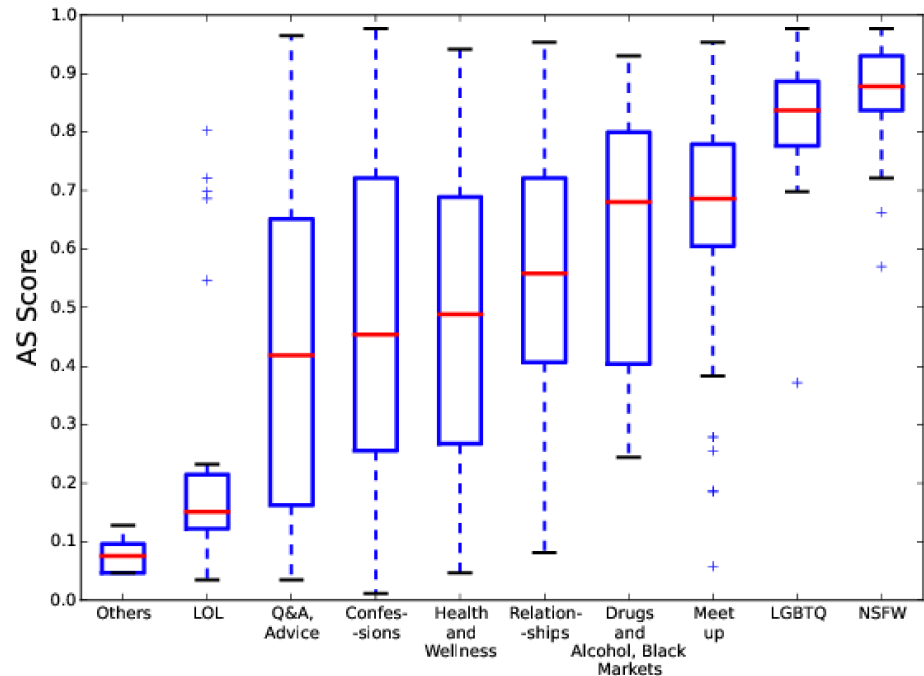- No gender difference.
  - WHY?

Figure 4: shows the distribution of *Anonymity Sensitivity Score* for all categories via box-and-whisker plot. *NSFW*, *Relationships* and *LGBTQ* categories contains highly sensitive content while *LOL* has low content sensitivity.

Correa et al 2015

Creepy but Inevitable? The Evolution of Social Networking

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ABSTRACT
This paper focuses on the fifth year of a cross-sectional trend study of enterprise social networking. Several stable patterns are evident—some activities have plateaued, others steadily increase in frequency. The fifth year did see a new development: As social networking companies visibly embraced behavior tracking and targeted advertising, concerns shifted from boundary regulation within personal networks to unsettling evidence of activity monitoring. However, benefits of use continue to outweigh drawbacks.

Author Keywords
Social networking; Facebook; LinkedIn; Twitter; Boundary

ACM Classification Keywords
H.5.3 Group and Organization Interfaces

A senior software design engineer explained why she has resisted her partner's constant encouragement to join Facebook. "I do not like how much information they collect about people (and) I don't need that kind of potential time sink." But without rancor, she said "Facebook I see as an inevitable thing. One day I will have to have a Facebook account. I am holding out as long as I can."

In ten years, social media went from relative obscurity to over a billion active users [14]. LinkedIn, Facebook, and the once-popular MySpace and Orkut were launched in 2003 and 2004; predecessors Friendster and Plaxo in 2002. New users and sites appear and established sites evolve, but as experience accumulates, habits and social conventions form. Where designers cannot or do not address challenges, people find workarounds.

Female users expressed significantly more privacy concerns in mid-2007. But later studies found women using access controls more heavily. This was correlated with women having fewer concerns.

Does anonymity always have to be a design feature? Is it possible to be anonymous on a platform where this is not the case?

Over the last few years since the three studies, many new platforms have emerged. What are additional ways/cues people use to manage their identity?