Faceted Identity, Faceted Lives: Social and Technical Issues with Being Yourself Online

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ABSTRACT
This paper explores key issues people experience managing personal boundaries within and across social technologies. We look in particular at email and online social networks. We offer a theoretical framework for understanding the errors in assumptions about the singularity of identity that are currently inscribed into the sharing models of social technology systems. Through a questionnaire study we examine how people facet their identities and their lives, and how these facets are expressed through use of email and Facebook. We found family was an extremely important context for sharing online, and that email was still a preferred form of communication for private sharing across facets of life. Single, working men had the highest level of incompatible facets, and a higher level of facet incompatibility was correlated with increased email usage and worry about sharing in the context of social networks.

Author Keywords
Identity, faceted identity, social media, email, social networks, Facebook, privacy, roles, social boundaries.

ACM Classification Keywords
H4.3 Information systems applications: Communications Applications. Electronic mail.

General Terms
Experimentation, measurement.

INTRODUCTION

Social media systems embody assumptions about the ways in which people relate to others. Features such as form-based profiles and avatars shape how people can represent themselves to others online. Users' privacy and access control settings underpin the choices that can be made about how to share content, and whether others are allowed to see them, contact them or be aware of their ongoing activities. Insensitive or inappropriate design of profiles and privacy settings may lead to confusion, minor misunderstandings, major embarrassment and potential risk of harm.

One particularly problematic trend in social media design is the assumption that a single unified user identity is appropriate and sufficient. A unified identity is presumably well-suited for business concerns and allows for better evaluation of patterns of activity and targeting of services. However from a human-centered perspective, this clearly reflects the questionable assumption that one identity fits all situations. As the penetration of online social networking has increased – in December of 2010 there are more than 500 million Facebook users world-wide [9] – the inadequacy of a single identity becomes more pressing as people create connections to others from multiple areas of their lives, including friends, family, and co-workers. Further, social media systems are increasingly pushing and pulling user generated content and activity streams from beyond the context in which they were originally shared, creating a sometimes useful but often socially awkward convergence of different areas of users' lives.

In reality, people's lives are 'faceted'; that is, people maintain social boundaries and show different facets or sides of their character according to the demands of the current social situation. A deeper understanding of how people manage identity across areas of their lives would greatly benefit the design of social technologies. The goal of this paper is to carefully examine existing social practices in how people facet their lives both off and online, and, based upon our observations, make recommendations for improved identity management and sharing across social contexts.

THEORETICAL FRAMEWORK

Faceted Identity, Faceted Lives

According to social identity theories [1, 25] people have many identities in their self-concepts, some quite personal and idiosyncratic, and some shaped by social context. For example, a person may categorize herself either as a mom if she is amongst her family or as a professor if she is amongst her students. Familial roles, occupational roles, and relational roles, are all examples of social identities that are strongly impacted by social context [13]. Many of these social identities have generally accepted norms for what

CSCW 2011, March 19–23, 2011, Hangzhou, China.

comprises success in that category – for example, an effective mom is very nurturing, and an effective professor speaks well in public. Thus social context and group identification meaningfully impact self-concept and behavior, particularly where normative cultural behaviors are associated with the group.

Christena Nippert-Eng [17] developed her bounded theory based on ethnographic studies of how people manage boundaries between work and home. She notes that self and identity are negotiated around space and time to retain distinct categories of existence, and that some of these boundaries across categories vary in permeability. In other words people may vary in the extent to which their lives and identities are faceted. Ashforth et al. [2] similarly argue that people vary in the extent to which they prefer their roles be integrated or segmented, depending on the requirements of the role. While on the one hand people seek to minimize the difficulty in transitioning between roles, on the other hand they seek to minimize the frequency of undesired interruptions across roles. Clark [4], in exploring her work/family border theory, proposes that the greater the differences across role domains, the less people engage in across-the-border communication.

For the sake of this discussion we define a faceted identity as one where different aspects of identity are performed depending on context, and expect that identity faceting will vary depending on the individual. See Figure 1. Many facets and contexts are very common, such as work, home, or social life, while others are idiosyncratic to individuals or groups. That identities may be faceted is often neglected in cultural representations of the self, which tend to favor more individualistic notions of protagonists who struggle to achieve their one "true" identity across situations. It cannot be emphasized enough however that for many people a happy, healthy existence is characterized by bounded areas of life where variations in identity are tightly constrained to social context.

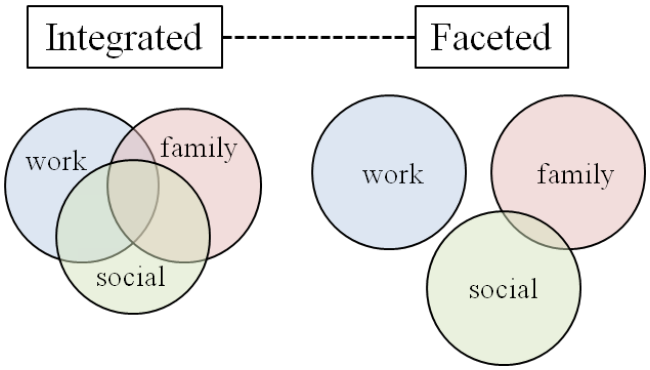

Figure 1. People may vary in the degree to which their identities are faceted.

We segment our lives into bounded areas because various facets of our identity are incompatible. Role strain [13] is experienced as a felt difficulty in meeting the norms of more than one role, and may be detrimental to psychological or social well being. In addition many behaviors appropriate to one identity or role might be quite harmful to another. An experience of exposing an identity appropriate in one context, but stigmatized in another context, may lead to very real distress or reduced functioning [20]. For example, online there are numerous examples of people being reprimanded or experiencing job loss for posting photos that while appropriate for their friends -- such as drinking beer straight from a tap [5] -- are not appropriate at work.

A socially intelligent person takes care to consider how her behavior impacts how she is perceived. The process of managing how others perceive the self to produce desired social outcomes is referred to as impression management [11]. For example, a professor may know she is an effective speaker, but she must engage in deliberate behaviors to create the same impression in the minds of her students (who will be rating her) or her department (who will be promoting her). People engage in impression management a) for instrumental reasons, to achieve rewards such as promotions, b) to be self-expressive, in a sense claiming identities by performing them, or c) simply to be liked by others. Impression management, as a process of performing our identities, is also quite dynamic and tailored to the current social context.

The tight constraint between identity performance and social context is one of the main reasons, we argue, that people find identity management and sharing difficult when online -- because users are not always aware of or in control of their audience, and do not have the tools to segment their contacts into the faceted areas of their lives.

Identity, Context and Sharing Online

In face-to-face situations people have many strategies for impression management and for minimizing potential role strain. As noted, the most common approach is to segment lives by place and time [17], and to engage in boundary work to minimize cross-boundary communication [4] or interruptions [2]. This kind of segmentation often relies on maintaining different physical contexts. Online contexts are rendered in software and are therefore more permeable. This permeability between the different spheres of social action increases the number of people with whom we may connect. As digital convergence becomes easier, it also opens the door for more potential problems with the leakage between the public spheres that hither-to-fore would have been easily kept separate.

Further, while online we have increased opportunities for self expression through profiles, photos, blogs, comments, avatars, and so forth, we have a limited awareness of, or control over who sees our self-projection. It is possible to be enacting multiple, possibly conflicting, facets of our identity at the same time, across many different social contexts. Online contexts are also more mutable than physical ones, as technically changing the privacy or access

control settings is relatively trivial to implement and propagate across a social networking platform. This has already caused issues; social outcry ensued when one online service decided to implement a relatively easy technical change that altered the ways in which their users were connected.

Many identity and privacy models have emerged in social technologies to help manage identity performance in conversation and media sharing. Perhaps the greatest level of control may be found in email, where we define for each shared object – the message and associated attachments -- who has access to the object. At an intermediate level of control, we may segment sharing at the group level through mailing lists or membership-based discussion boards. People may further segment areas of their lives by creating different email accounts [12]. Sharing is also segmented using different social applications to create bounded contexts [21]. For example, people use Facebook for personal networking, and LinkedIn for professional networking.

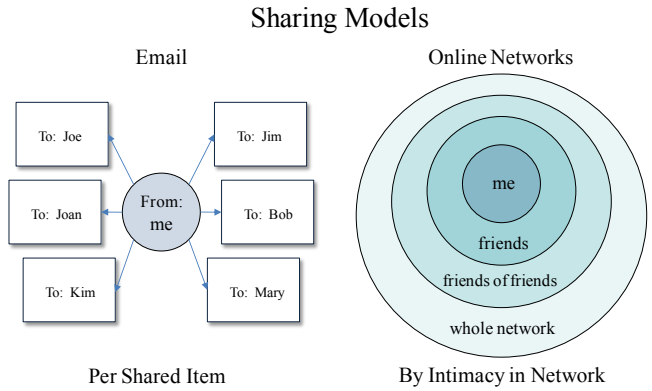

Figure 2. Email and online social networks have very different sharing models -- one optimized for controlled sharing, and the other optimized for broadcast sharing.

Perhaps the most permissive sharing model may be found in online social networks. In network-based models, sharing is managed through pair-wise social connections where people explicitly articulate that they know each other and have access to each others' content [3]. Users may then provide access to their content depending on degree of connection in the network, such as to all friends, or to all friends of friends -- an exponentially large number. See Figure 2. These network-based sharing models present new challenges to average users as they struggle to retain boundaries between areas of their lives [3, 6, 22]. Although Facebook is primarily a context for personal sharing [10], because of its increasing penetration and the social awkwardness surrounding the denial of friend requests, many individuals find they have "friends" from multiple social contexts, including friends, family, and co-workers.

Several recent studies have documented how people in online networks manage potentially awkward sharing situations, particularly as they enter the work force and connect with work friends in Facebook [6, 15, 22]. These studies generally find while some people do adapt to these trends by simply accepting the more public nature of their sharing across contextual boundaries, many are censoring their public profiles, sending and receiving messages privately, and increasing use of privacy controls [24]. A study by Ellison et al. [8] suggests that people use Facebook more for developing bridging social capitol, rather than bonding social capitol. That is, Facebook is better used for developing social resources through weak social ties, rather than for the more intimate, emotional social support that comes from close friends and family. These studies indicate that people use online social networks for less intimate interactions than found in email and instant messaging.

Following these observations, the goal of this research was to explore several questions.

a) Do people meaningfully vary in how they facet their lives, and are some of these facets incompatible?

b) What are the most common facets of identity, in terms of importance and how people spend their time?

c) How do people use different technologies to maintain their facets? In particular, how do people use email, optimized for controlled sharing, versus social networks, optimize for broadcast sharing, to maintain the facets?

d) How does fear of inappropriate sharing across facets impact the use of various social technologies?

QUESTIONNAIRE STUDY

Procedure

We created a six page web-based questionnaire and distributed it online through an ad on the Yahoo! network over two weeks. The ad elicited a .8% click-through rate, which is somewhat higher than found with online banner ads [23]. The questionnaire was targeted to individuals of 18 years or older in the United States. Given the high drop-out rates of online questionnaires, each page was saved separately. We filtered out participants who did not complete at least half of the questionnaire. Of those, 72% of participants completed the questionnaire in full. 9 individuals were screened out for providing no variance in questionnaire responses (e.g., selecting all 1s on a Likert scale that had items of reversed valence). A total of 631 participants were included in the analysis.

Measures

The questionnaire first asked for basic demographic information and levels of overall technology usage, including usage in minutes of email and Facebook. To compare subjective intensity of email and Facebook usage, we adapted a measure of social intensity from [8], for which users indicated to what extent the technology had become a part of their daily lives, and to what extent they would feel out of touch if it was shut down.

Social Personality Items

Then questionnaire next asked a series of questions assessing social personality, including faceted identity, facet incompatibility, extraversion, and self-monitoring. Measures of extraversion and self-monitoring were adapted from validated personality scales [14, 16].

Faceted identity. A person with a more faceted identity has different sides of identity that are expressed in different situations. The questionnaire items measuring faceted identity included "I have parts of my life that are really very different from each other", "In different situations with different people, I often act like very different persons", and "I prefer to keep different parts of my life separate."

Facet incompatibility. Participants were asked to indicate the extent to which they had incompatible facets of identity in their lives with one questionnaire item, "Some specific roles, identities, and groups in your life may tend to be incompatible. To what extent do you tend to have roles, identities, or groups that are INCOMPATIBLE?"

Extraversion. We included a brief measure of extraversion to compare the relative impact of identity faceting against a well-understood personality trait that should impact use of social technologies. Extraversion--as opposed to introversion--is a tendency toward more sociability, being more talkative and gregarious and enjoying the company of larger social groups. Items were adapted from [14] and included "I am the life of the party", "I am quiet around strangers", and "I make new friends easily."

Self-monitoring. In the social psychological literature the personality construct most similar to our notion of faceted identity is self-monitoring -- the extent to which one adapts to meet the demands of the social context [16] -- so was included in the questionnaire. Items included "In order to get along and be liked, I tend to be what people expect me to be rather than anything else" and "When I am uncertain how to act in a social situation, I look to the behavior of others for cues."

A factor analysis was performed on the above set of personality items to verify the three separate constructs emerged from our personality items. As expected, three factors emerged – faceted identity, extraversion, and self-monitoring. Items that did not have factor loadings of .5 or higher were excluded from the final measures of faceted identity, extraversion, and self-monitoring.

Areas of Life and Technology Usage

To gain a better picture of how people facet their lives, we asked participants to indicate levels of participation in areas of their lives and their important identities in each of these areas. The areas of life were adapted from roles research, and include work/school, family, relationship, social life or social clubs, community or volunteer activities, hobbies or interests, sports, religious activities, and other [19]. We asked participants to indicate the extent to which they used email and Facebook to support these different areas of their lives, and whether worry about inappropriate sharing across these facets prevented them from sharing using various technologies. The questionnaire ends with a series of open-ended questions asking for more explanation of why they used different types of technology, particularly email and social networking.

Participants

631 individuals participated in the survey, 59% male, 41% female, with a median age of 50, slightly older than the median age of US estimated at 45 [26]. Participants were 79% Caucasian, 53% had completed at least two years of college, and 40% had full time jobs. 22% were retired, 9% unemployed, 6% part-time jobs, 6% home-makers, and 4% students. 38% were single, and 62% were married or had a de facto life partner. 42% had no children, 26% had children at home, and 32% had children but no longer at home.

Basic Technology Usage

Our respondents exhibited high levels of Internet usage. 99% of our participants had at least one active email account (defining active as used in the past month), averaging 2.9 active accounts each. 70% reported checking their email at least once a day, spending on average 56 minutes a day in email.

84% of our participants reported using social technologies for personal use or work once a day or more (such as email, online, instant messenger, multi-player games, and so forth), spending 2.2 hours a day. 67% of our participants had a Facebook account, out of which 44% logged in at least once a day. 24% logged in one to few times a week, and 23% logged in once a month or less. Facebook users spent an average of 39 minutes a day in Facebook, having on average 129 Facebook friends, 57% of which were "real friends" in their social lives (as opposed to they did not really know them, or knew them through work).

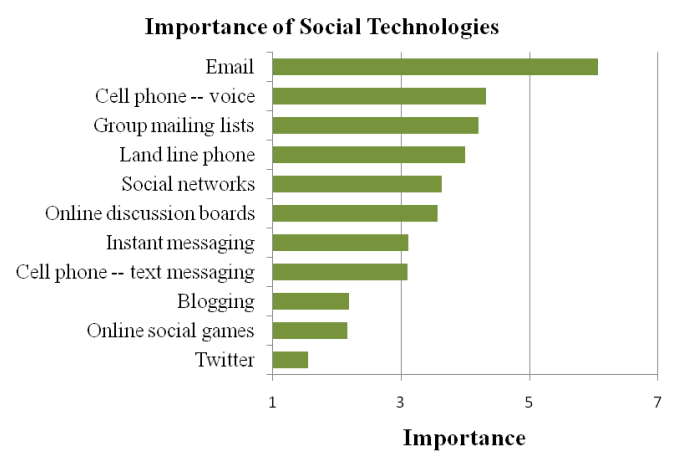

Figure 3. Relative important of various social technologies in communicating with people in participants' lives. (1 = not at all, and 7 = extremely so)

In rating technology importance in communicating with people who matter the most to them, participants rated email as most important. See Figure 3.

To provide a better context for comparing how faceted identity impacts communication in email and Facebook, we must first examine general usage patterns. Is Facebook usage supplanting email usage, particularly in younger users? If Facebook was supplanting email, their usage would be negative correlated. We found that in minutes spent per day, usage of email and Facebook were positively correlated (r = .33, p < .001)[1], indicating that both are probably driven by a general sociability or an inclination toward online activities. We found age did have a small but significant positive effect on email minutes per day (r = .13, p < .009)[2] and a small negative effect on Facebook minutes per day (r = -.12, p < .03), because older participants use email more than Facebook. Nonetheless, even participants of 25 years of age or less were spending as much time in minutes per day on email (M = 41.9, SD = 28.7) as on Facebook (M = 35.9, SD = 29.5), with a paired-sample t-test showing no significant difference for this age group.

We found that email (M = 3.4, SD = .69) had significantly higher level of social intensity than Facebook (M = 2.3, SD = .99) for our users with Facebook accounts t(403) = 21.21, p < .001). Age had no impact on email intensity, but a small negative impact on Facebook intensity (r = -.16, p < .002). An omnibus ANOVA of email minutes on time since creating a Facebook account (less than 2 months ago, 2 to 6 months ago, 7 months ago up to a year, 1 year ago, 2 years ago, 3 years ago, 4 years ago, 5 or more years ago) showed no significant effect, further indicating that Facebook usage does *not* supplant email usage even amongst early adopters of Facebook. Pairwise comparisons of levels of time since joining Facebook showed only those who joined less than 2 months ago and those who joined 2 years ago had a significant difference in email usage, where those 2 years ago used email *more* often (t(103) = 2.49, p < .05). In sum, the pattern of usage between email and Facebook suggests they are similar but not directly competing forms of social interaction.

Faceted Identity, Faceted Lives

To what extent should people's identities be characterized as faceted? An examination of a frequency distribution of our measure of faceted identity indicates a sizeable percentage of our users have high levels of faceted identity (on a scale of 1 = not at all, to 7 = extremely so, 63% scored over 4). See Figure 4. The degree of variability on this measure further indicates people have quite different levels of identity faceting. Although participants reported their identities were fairly faceted, they did not report on average having incompatible roles and identities (M = 2.9, 26% scored over 4). Nonetheless, their levels of identity faceting correlated with the extent to which they tended to have incompatible roles and identities. See Table 1. Interestingly, facet identity and facet incompatibility had small positive correlations with extraversion.

	Self-monitoring	Extraversion	Incomp. Facets
Faceted Identity	.05	**.11**	**.45**
Self-monitoring		**-.14**	.09
Extraversion			**.19**

Table 1. Pearson correlations between faceted identity, facet incompatibility, extraversion, and self-monitoring. Bolded items are p < .05.

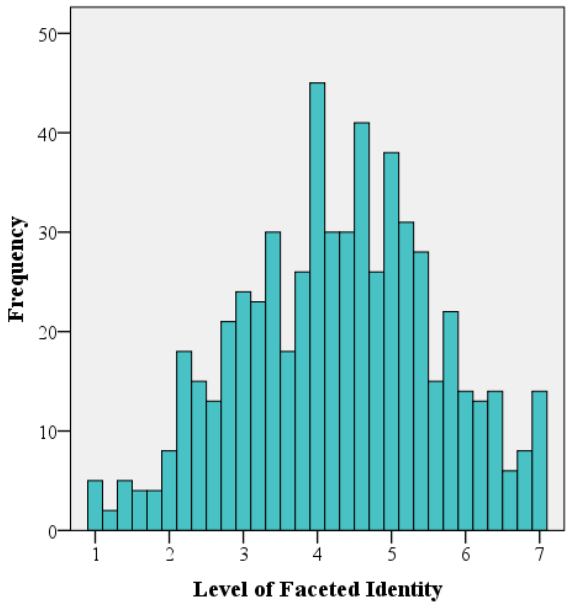

Figure 4. Histogram of measure of faceted identity, averaged so that 1 = not at 7, and 7 = extremely so.

We asked participants to report what percent of their awake time they spent in various areas of their lives (e.g., with family, in their relationship, or at work or school) drawn from roles research [19] (allowing for overlap). As can be seen from Figure 5, family plays a very prominent role. Participants then listed their important identities for each area of life. The important identities listed in these categories are too diverse to capture here, however illustrative examples are provided below (see Figure 6). A sizeable percentage of identities listed under "other" involved civic or political identities, suggesting this should be another primary category.

[1] All statistical analyses of self-reported minutes per day normalize the distribution using a log transformation of the raw value, because a number of participants reported much higher

[2] All r-values reported are Pearson correlation coefficients.

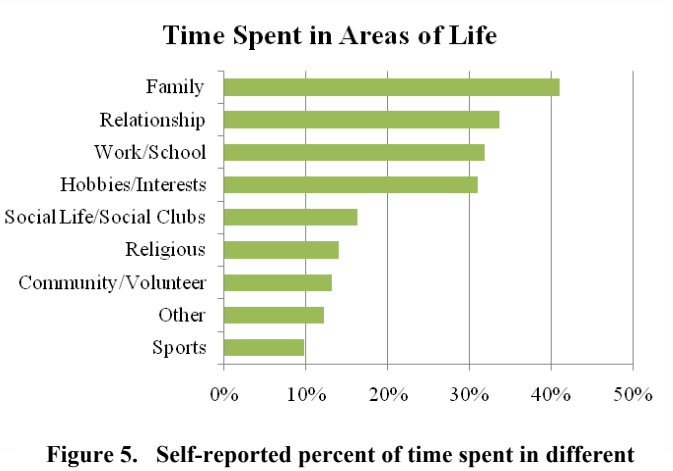

Figure 5. Self-reported percent of time spent in different areas of life.

The impact of demographic variables on faceted identity was analyzed using a univariate analysis of variance, with gender (male vs. female), relationship status (single vs. life partner), family status (children vs. no children), age (less than 45 vs. 45 or older) and job status (working vs. not working) entered as fixed factors. We did not find any main effects on level of faceted identity, however we did find a significant interaction effect, with women with children showing lower levels of faceted identity ($F(1, 438) = 6.24$, $p < .02$). (See Figure 7.)

When we performed the same analysis on the extent to which facets were incompatible, we found younger people had higher incompatibility levels than older people ($F(1, 333) = 8.52$, $p < .005$), males higher levels than females ($F(1, 333) = 5.07$, $p < .03$), and people without children more incompatibility than people with children ($F(1, 333) = 4.41$, $p < .04$).

Family: *sister, brother, mother, daughter, husband, dad, uncle, cousin*

Relationship: *boyfriend, spouse, caretaker, wife, husband, partner, fiancé, dating*

Hobbies/Interests: *quilter, musician, participant, group leader, collector, artist, gardener, creator, pen pal, mentoring*

Work/School: *writer, student, manager, mentor, co-worker, being the boss, custodian, leader, engineer, farm wife*

Social Life/Social Club: *friend, member, leader, follower, co-group member, organizer, connector, neighbor*

Religious/Spiritual: *educator, preacher, congregant, devotee, member, parishioner, mystic, Christian, follower, baptist*

Community/Volunteer: *board member, advocate, member, volunteer, worker, shriner, good neighbor, webmaster, donor*

Other: *philosopher, socialist, conservative, caregiver, liberal, leader, video gamer, tree-hugger*

Sports: *assistant coach, fan, golf, runner, participant*

Figure 6. Examples of important identities in areas of life.

We found a three way relationship status by job status by age interaction effect ($F(1, 333) = 9.02$, $p < .004$), with single, working, younger people having the highest levels of incompatibility, and older, non working people in relationships having the lowest levels of incompatibility.

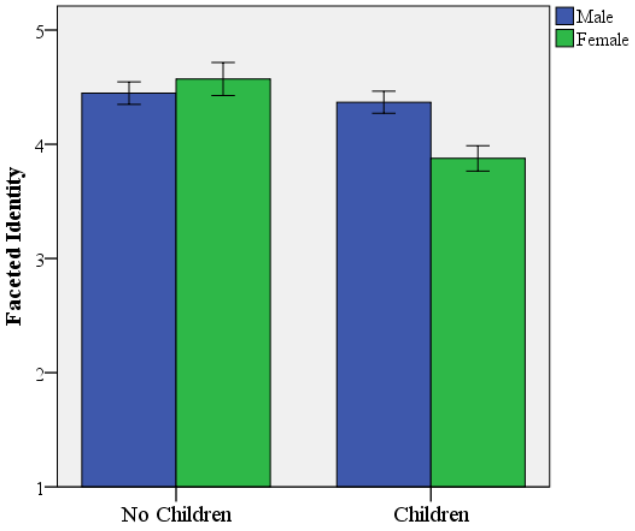

Figure 7. Impact of gender and family status on faceted identity.[3]

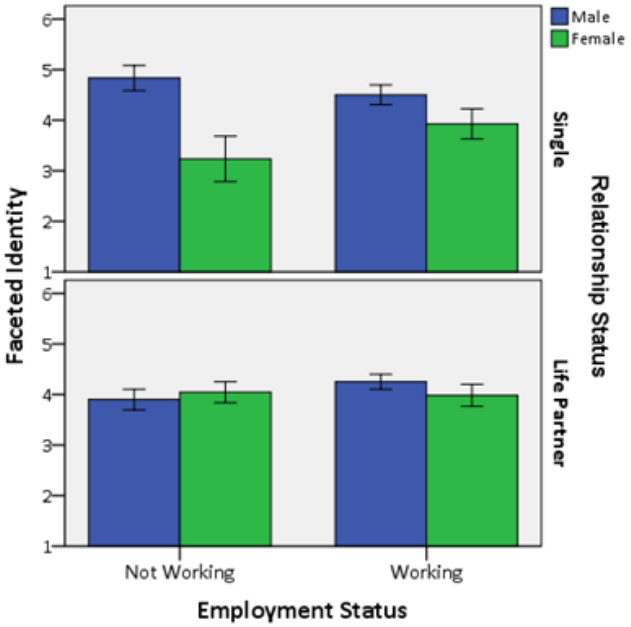

Figure 8. Impact of gender, relationship status and job status on facet incompatibility.

Finally, there was a three way gender by relationship status by job status interaction effect ($F(1, 333) = 4.87$, $p < .03$), with single working men showing the highest levels of incompatibility, and not working women in relationships showing the lowest levels. (See Figure 8.)

[3] Error bars throughout the paper represent one standard error.

Usage of Technology for Facets of Lives

We asked participants to indicate the extent to which they used email and Facebook for various areas of their lives[4]. As can be seen from Table 2 and Table 3, participants reported using both email and Facebook primarily to engage in interactions with family, followed by hobbies/interests. Email is also used for work/school and for life management (bank statements, receipts, and so forth). Surprisingly, interacting with friends and social clubs was fifth in line for email and third in line for Facebook. This presents a very different picture than related research, which generally had younger participants from colleges or the technology industry [6, 15, 22].

Area of Life	Mean	SD
Family	5.15	1.94
Hobbies/Interests	5.13	2.26
Work/School	4.45	1.99
Life Management	4.24	2.20
Social Life/Social Clubs	3.62	2.12
Media/Entertainment	3.35	1.94
Relationship	3.20	1.74
Community/Volunteer	3.19	1.90
Newsletters/Ads	3.18	2.21
Health	3.12	2.24
Adult Content	2.77	2.23
Religious/Spiritual	2.30	1.77
Sports	2.11	2.57

Table 2. Level of email usage for areas of life. (1 = not at all, and 7 = extremely so)

A factor analysis was performed on measures of participation in areas of life, including overall time, email usage, and Facebook usage. Six factors emerged, with Facebook usage loading on a more lightweight social and media entertainment factor, and email usage loading on a more serious social factor. Overall time spent with family corresponded with time spent with one's relationship, friends (social), and interests. Work and family online emerged as factors with similar loadings across email and Facebook, whereas interests loaded more highly on email usage. See Table 4. These results further illustrate that while email and Facebook are both used for social interactions, they appear to be different types.

[4] We added additional non-role based types of usage (for games, ads or life management) to assess their relative importance compared to role-based usage.

Incompatible Facets and Usage

Our final questions addressed to what extent having a more faceted identity and higher levels of facet incompatibility impacts level of technology usage.

Area of Life	Mean	SD
Family	4.13	2.12
Hobbies/Interests	3.37	1.97
Social Life/Social Clubs	3.17	2.29
Media/Entertainment	2.40	2.17
Games	2.31	1.89
Relationship	2.15	2.30
Work/school	2.14	1.96

Table 3. Level of Facebook usage for areas of life. (1 = not at all, and 7 = extremely so)

	Components					
	Social Enter-tainment	**Family Face to Face**	**Serious Social Online**	**Work**	**Family Online**	**Interests**
% Variance:	23.5%	14.2%	9.3%	8.0%	7.6%	6.2%
Overall Time						
Work	.10	.01	.06	.83	-.10	-.13
Family	-.07	.82	-.07	-.07	.18	.00
Relationship	-.06	.81	.10	-.05	.16	-.03
Social	.28	.68	.26	.00	-.17	.13
Interests	.07	.57	-.10	-.05	-.21	.57
Email Usage						
Work	-.06	-.16	.28	.77	.15	.04
Family	-.07	.00	.30	.06	.82	.11
Relationship	.15	.03	.78	.12	.14	.05
Social	.21	.13	.77	.03	-.04	.18
Interests	.08	.05	.14	-.05	.14	.84
Media	.32	-.05	.37	.06	.05	.49
Facebook Usage						
Work	.28	-.02	-.10	.67	.12	.07
Family	.32	.21	-.17	.09	.77	.01
Relationship	.62	.08	.35	.16	.07	-.09
Social	.76	.04	.31	.02	.08	.02
Interests	.77	-.01	-.04	.15	.05	.31
Media	.86	.00	.07	.06	.02	.11

Table 4. Factor analysis (with varimax rotation) of measures of participation in areas of life including overall time spent, email usage and Facebook usage.

Usage	Extravert	Self-Monitor	Faceted Identity	Incomp. Facets
Email:				
Work	**.12**	***-.10***	.07	.06
Family	***.10***	**-.11**	.01	-.01
Relationship	**.22**	.04	**.19**	**.21**
Social	**.31**	.04	**.14**	**.19**
Interests	.06	-.08	**.14**	**.13**
Media	**.16**	.03	**.15**	**.17**
minutes / day	**.11**	-.04	.04	**.13**
Intensity	**.14**	-.05	***.09***	**.14**
count emails	***.08***	-.06	***.10***	***.12***
Facebook:				
Work	.09	-.02	.03	.07
Family	.02	-.03	.02	.02
Relationship	**.14**	.09	**.16**	**.20**
Social	***.10***	.04	**.18**	**.18**
Interests	.10	-.06	.05	.09
Media	.07	.04	**.14**	**.24**
minutes / day	.05	-.05	**.09**	.05
Intensity	.10	.00	.05	**.09**
Contacts	**.15**	-.03	.07	.00

Table 5. Pearson correlations between personality measures and types of email and Facebook usage.

We generally found that people with higher levels of faceted identity and facet incompatibility were reporting higher levels of email and Facebook usage across the more social, interest-based areas of life. These correlations are at a level higher than self-monitoring, and comparable to extraversion. (See Table 5.)

We were predicting that people with faceted identity and especially those with incompatible facets would use email more than Facebook because email enables greater control over sharing. Surprisingly, faceted identity generally corresponds with mild, positive increases in usage of each. Perhaps this is because the more people participate in different areas of lives, the greater their communication needs. Nonetheless, suspecting we may be encountering a ceiling effect with older participants, who primarily use just email, we split our user population at 35 (which is about the inflection point for the social networking generation) and examined the interaction between age and faceted identity on email and Facebook minutes. Using a univariate analysis of variance entering age (high vs. low) and incompatibility (high vs low) as fixed factors we found age significantly interacted with facet incompatibility in predicting email minutes per day ($F(1, 427) = 6.79$, $p < .01$). Younger participants with higher levels of incompatibility had higher levels of email usage than those with low incompatibility. See Figure 9. There was no such interaction effect on Facebook minutes or with general faceted identity.

Finally, we asked participants directly to what extent they worry about sharing across incompatible roles and identities and if this worry prevents them from using various social technologies. Participants did not report particularly high overall levels of worry (see Table 6). As expected, however, they did report the highest level of worry for social networking sites. However, an examination of pair-wise correlations indicates that the higher the levels of faceted identity and facet incompatibility, the more people worried about sharing online, particularly in the context of social networks. See Table 7.

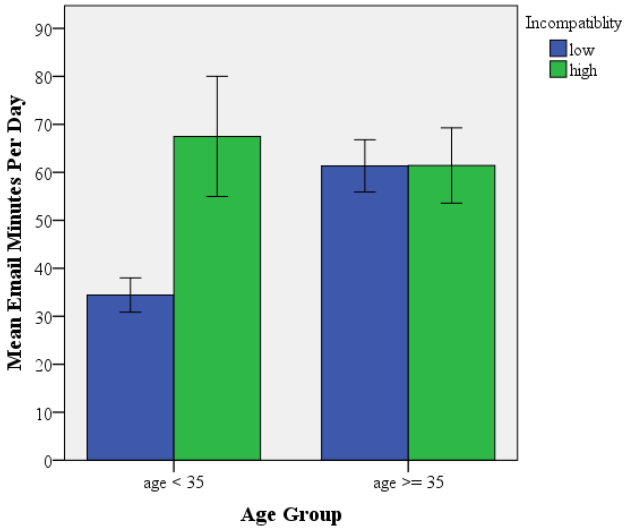

Figure 9. Younger participants spent less time in email for personal use if they were low in facet incompatibility.

Social Technology	Mean	SD
Social networks	2.4	2.00
Professional networks	2.2	1.88
Email	2.1	1.80
Group mailing lists	2.1	1.76
Instant messaging	2.0	1.72
Online multi-player games	1.7	1.58

Table 6. Extent to which worry prevented sharing by type of social technology. (1 = not at all, and 7 = extremely so)

Open-Ended Responses

At the end of the questionnaire, we asked participants to compare their use of email and social networks to develop a better understanding of our quantitative results. The majority of the responses described differences between email and social networks in terms of personal interactions and privacy.

- *"Always prefer email; I have a personal feeling that I can take time to think things out".*
- *"Email is used to connect with people I already know and to talk to them privately."*
- *Social networks are very public only things that won't come back to haunt you should be posted in them, email is a bit more private and controllable"*

Social networks enable broadcast sharing, including people with whom they have lost touch and with extended family.

- *'Social networks allow you to essentially broadcast to all your friends at once. It is easier and more fun to use a social network for this."*
- *'I use social networking for finding friends and colleagues with whom I have lost touch.'*
- *'Email is for personal, family and close friends. Facebook is for school friends and some family to keep in touch.'*
- *'Social networks are like a virtual gathering with people who are friends, acquaintances and strangers.'*

A number of comments directly addressed problems with crossing boundaries on social networks.

- *"Email is much more personal and "private" than Facebook. There is a wide range of ideologies among friends on Facebook. I don't care to provoke and neither do they."*
- *"The difference for me is, that I am gay, so I try to keep family separate, co-workers separate from my gay family, as that is a private part of my life,who I am talking to shouldn't be a concern of anyone elses."*
- *"When you post something to a social network, everyone can see it, whether it be a private or public profile, even then all of your "friends" can see it. I don't necessarily want every single person connected with me on Facebook to see one thing that maybe only a few of my real friends need to see. Or maybe I don't want my mom to see something that I did at work or with friends. Or maybe I don't want my boss or another co-worker to see my status when I called in "sick" to work."*

It is clear from these responses that users select the most appropriate technology for sharing depending on the privacy and boundary requirements of their communication.

CONCLUSIONS

We found that for many people identity is faceted across areas of their lives, that some of these facets are incompatible, and that this incompatibility impacted technology usage and self-reported worry about sharing in social technologies, particularly in social networks. Family emerged as the most important facet of people's lives, and younger, working men without children reported the highest levels of incompatibility across facets. Further research will be needed to explore the nature of these demographic and life stage effects, however the pattern of results suggest that it is particularly when people engage in counter-normative or stigmatized behaviors that they most need identity segmentation and tools for focused sharing. That women had more integrated identities than men is consistent with a proposition by Ashforth et al. [2] that a preference for integrated roles is consistent with more feminine and collectivist cultures.

We found that although email and Facebook usage were positively correlated, Facebook usage did not meaningfully impact levels of email usage depending on how long ago users created a Facebook account. Email, which enables more personal, private sharing had a much higher level of social intensity than did Facebook. We further found that participation in email and Facebook across areas of life loaded on two distinct factors, one more lightweight social sharing and the other a more serious social sharing.

Social Technology Worry	Identity Faceting	Facets Incompatibility
professional networks	**.25**	**.36**
social networks	**.22**	**.34**
instant messaging	**.15**	**.27**
email	.11	**.29**
group mailing lists	**.18**	**.30**
social games	.11	**.18**

Table 7. Pearson correlations between faceted identity, incompatible facets, and social technology worry. Bolded items are significant at $p < .05$ level.

These results, along with participants' comments, suggest that email and online networking are two distinct communication tools, drawn from the proverbial tool belt depending on the users' communication and privacy needs. Although users expressed appreciation for keeping in touch with their extended networks in Facebook, they used email for their more private, bounded sharing across more diverse areas of their lives. People with higher levels of incompatibility were especially more likely to use email. Interestingly people with higher levels of faceted identity had higher usage of social technologies overall, perhaps because of their increased communication needs across these areas of their lives. However those with higher levels of facet incompatibility also expressed more worry about sharing, especially in social networks.

It should be noted that because we recruited study participants through an online ad on the Yahoo! network, the results are biased towards a population older than the median age in the United States, a population that further had the time and inclination to click on an online ad while online. As our study shows that demographic and life stage variables are meaningfully related to life faceting and technology usage, we might further expect to develop a different picture from a younger sample of participants, or from people of other nationalities. Another limitation of this study is that our data is correlational in nature, and any causal inferences need to be made with caution.

Throughout the discussion of faceted identity we deliberately framed the problem in terms of sharing rather than privacy, in part because of the privacy paradox [18] that while most people say they want privacy controls, they do not tend to use them. Our comparison of email and social networks suggests that people are fairly adept at using the appropriate tool for the appropriate communication. Nonetheless, we would argue that while

people may over share rather not share at all, they would prefer to be able to *focus* their sharing towards the appropriate areas of their lives.

Social networks in particular would benefit from tools for intimate, private sharing that honor the boundaries between different areas of people's faceted lives – particularly family, work and social sharing. Tools that enable faceted identity and sharing will greatly improve user experiences of social media, because users would benefit from both the advantages of broadcast, network-based sharing, and the control provided by contextual boundaries.

ACKNOWLEDGEMENTS

Special thanks to our participants for donating their time.

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