Conference paper for Amsterdam Privacy Conference 2012

**Converging contexts on social network sites:
Has the contextual privacy issue been solved?**

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1. Introduction

Social network sites have long been central in the discussion of online privacy especially Facebook, the most widely adopted social network site[1]. According to its founder, Facebook is about making the world more open and connected:

"Six years ago, we built Facebook around a few simple ideas. People want to share and stay connected with their friends and people around them. If we give people control over what they share, they will want to share more. If people share more, the world will become more open and connected. And a world that's more open and more connected is a better world" (Zuckerberg, May 24, 2010: The Washington Post)

This deduction seems persuasive and the values of openness and connectedness are often repeated in relation to new technologic development. Nevertheless, Facebook has so far not been good at enabling people to control how they share information and especially with whom. Many updates have included default changes in design, transparency and flow of information like in 2010 when Facebook made changes to the default settings for privacy on all profiles, making status updates etc. publicly available to people outside of the platform[2][3]. Many researchers, notably Danah Boyd (2008a, 2008b, 2010) and Sonia Livingstone (2008, 2010), have addressed privacy risks and concerns, particularly within social networks in relation to interface design and poor information to users about changes in default settings and core functionality. Gross and Acquisti (2005) pointed out early on that students seemed generally unconcerned with privacy risks on Facebook and that few people actually used the privacy settings. Recently, however, whether due to better design or a change in user attitude, it does seem that people are starting to become more aware of the importance of privacy settings. In a study from 2008, Lewis, Kaufman and Christakis (2008) hypothesize that a more regulatory privacy movement might be on the rise in correlation with general cycles of technological discovery. Later research has indeed confirmed that the majority of users are increasingly inclined to adjust their privacy settings at least to some extend (Boyd, 2010). Other research confirms that users are concerned with their privacy on social network sites but mostly in relation to social privacy (Raynes-Goldie, 2010), i.e. how you present yourself within the personal network and towards people who might have immediate power over you (e.g. parents, colleagues or friends)[4]. Although some privacy management seems to be taking place on social network sites, many issues are still evident. Livingstone and Brake (2010) express general concern with youthful exploration and the nature of pushing boundaries combined with a general lack of external regulation to protect privacy on social network platforms.

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[1] Approximately 750 million accounts according to ebizmba.com [15-08-2012]
[2] Other controversial updates include the introduction of the 'News Feed' (2006), the 'Beacon' feature (pulled back in 2009), the face recognition software (introduced in 2010), and the Facebook Timeline (introduced in 2012)
[3] Se McKeon's visualization of The Evolution of Privacy on Facebook (2005-2010)
http://www.mattmckeon.com/facebook-privacy/
[4] Whereas the same concern is not directed towards more abstract privacy threats of institutions (misuse of personal information by governments, companies etc.), which have mostly been the focus of traditional privacy research (Westin, 1967).

Furthermore, researchers have criticized the core functionality of social network sites for lacking nuance and understanding of the offline social interaction, particularly in the merge of multiple social contexts exemplified well by the introduction of the 'news feed' now central to the front page of Facebook (Boyd, 2008). Boyd highlight the issue of context collapse and expresses concern with the fact that Facebook publishes all social interaction merged in one information stream without attention to context thereby ignoring traditional offline dynamics of social privacy (Boyd 2008a, 2008b). This problem is evident in the countless examples of people getting fired or getting in trouble with their parents, school authorities etc. for posting inappropriate comments. Hogan (2010) suggests that interaction in collapsed contexts, like social network sites, should be viewed more as an exhibition because of the asynchronous online availability of your personal data. In order to interact appropriately, users should in theory consider the lowest common denominator of their particular network as well as the intended main audience usually a smaller sample of close friends. Nissenbaum introduces the term 'contextual integrity' as key in understanding privacy and technology issues in general and emphasizes that privacy is not about limiting, but rather appropriating, the flow of personal information. Each social context has different social norms for information sharing and thus contextual integrity is violated if these norms have been unjustly breached (Nissenbaum, 2010). Her ideas are in line with Altman's privacy regulation theory (1975) where personal information is a currency, which is distributed in accordance with the level of friendship and intimacy and thus an important tool to show trust and affection and define close relations to other people. The quality of privacy is not in its secrecy but on the other hand in the distributive potential of building close relationships and intimacy by sharing personal information with selected people. In this paper I will use primarily Altman and Nissenbaum's understanding of privacy as a vantage point for my analysis of emerging contextual features on social network sites, but I have also been inspired by studies similar to mine notably (Palen and Dourish, 2003; Lampinen, Lehtinen, Lehmuskallio and Tamminen, 2011; Barhuus, 2012;).

2. Here comes the competition

In 2010 a small developer unit launched an immensely popular crowd funding campaign to make an alternative "privacy aware, personally controlled, do-it-all distributed open source social network"[5]. Within just 12 days, they had collected their requested amount of $10.000 from private donors surpassing $200.641 by the deadline (June 1, 2010). This could hint that some users have indeed been waiting for a more privacy aware social networking option. In line with many researchers' highlight of the context collapse on Facebook, Diaspora presented a possible solution by introducing the feature 'aspects'; a new way of dividing your network into smaller groups and thereby choosing whether to interact in a public, semi-public or strictly limited context of sub-groups consisting only of family, class mates, work relations or other[6]. Diaspora was the first of the three to introduce a feature specifically designed to address issues of contextual integrity, but they have been slow in development, and a final version has yet to be released.

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[5] http://www.kickstarter.com/projects/196017994/diaspora-the-personally-controlled-do-it-all-distr [15-08-2012]
[6] Another important feature is Diaspora's decentralized approach making sure that you can own and manage your own data on your own server
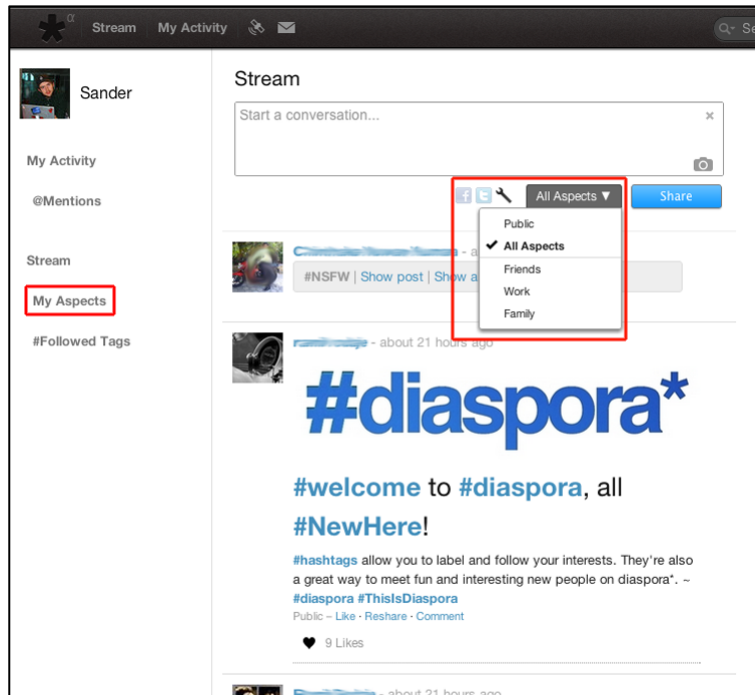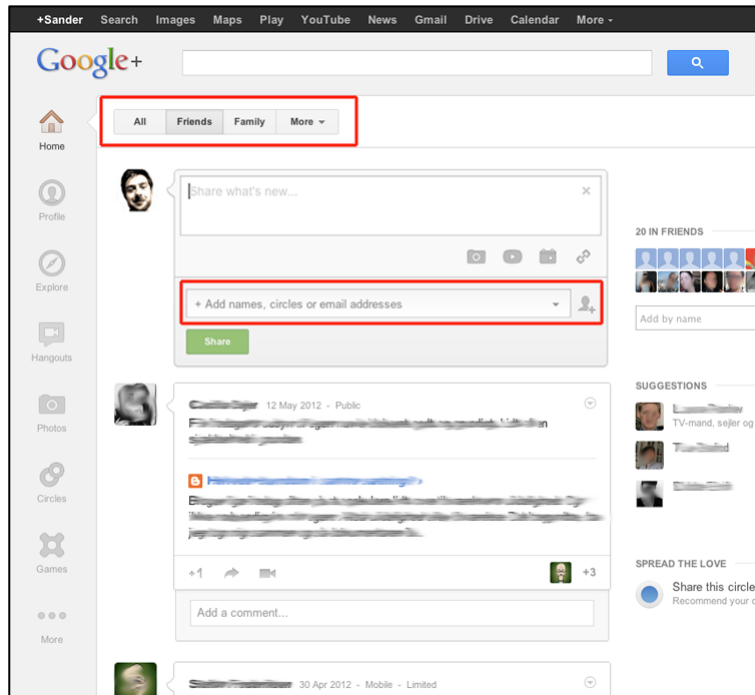
Pic 1. Diaspora's design with highlighted contextual features ('aspects')

In the summer of 2011 Google introduced their new social network site, Google+, which included a feature identical to Diaspora's idea of 'aspects', but named it 'circles'[7]. Google+ had the advantage of a huge user base from its many other platforms, which helped them recruit 90 million active Google+ users by January 2012[8]. However these numbers are less impressive when considering that the average user in January 2012 only used about 4 minutes on Google+ while using an average of 405 minutes on Facebook (according to the Wall Street Journal)[9]. These numbers show that while Google+ might have had success in making an easy sign-up system for users of other Google products, it currently does not constitute a real contender to Facebook.

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[7] Google+ introduces many other features, but in this paper I focus on the contextual
[8] https://plus.google.com/u/0/106189723444098348646/posts/jcyvVa5K4JW [15-08-2012]
[9] http://online.wsj.com/article/SB10001424052970204653604577249341403742390.html [15-08-2012]

Pic 2. Google+'s design with highlighted contextual features ('circles')

After both Diaspora and Google+ added contextualizing features, Facebook decided to introduce the feature 'lists', which is basically the same option of contextualization. Interestingly, Facebook also changed their 'groups' feature from large communities into smaller forums that users create to communicate in closed environments. Following these recent changes, the argument for migrating to another social network sites has thus been less apparent, but the question is whether the problem of collapsing context on social network sites has thereby been solved?
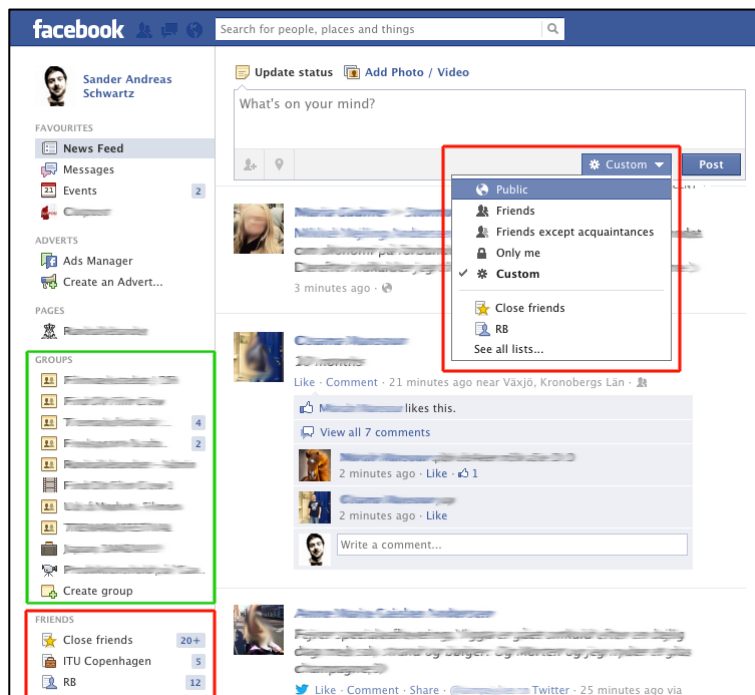
Pic 3. Facebook's design with highlighted contextual features ('lists':red, 'groups':green)

5. Method

In 2010, when Diaspora announced their new privacy aware social network site, I started to investigate how they approached and defined better privacy regulation. In winter 2010 I conducted two focus groups, with the purpose of discussing the appeal of Diaspora's contextualized communication and the privacy norms and challenges on social network sites in general[10]. The focus groups were recruited from high school students at Ørestaden Gymnasium and university students from the IT University respectively. The groups consisted of 4-5 male and female participants[11]. After Google+ and Facebook's introduction of contextual features, I decided to conduct another series of focus groups, with the purpose of looking on the actual use and discussing privacy management on social network sites in everyday life (Kvale, 1996). I conducted four similar focus groups at the same institutions, this time with segregated male and female groups. The data I will be using for this paper is based on the following 6 focus groups:

Year	Institute (age)	Male	Female	Mix
2010	High School (16-17)			X
	University (24-30)			X
2012	High School (16-18)	X	X	
	University (23-31)	X	X	

Petronio (2002) writes that people require new rules through socialization of preexisting rules or by negotiating rules as new collective boundaries are formed in relation to communication privacy management theory. This process is recreated in an artificial microsystem in the focus groups, as participants debate, justify and develop rules and norms together.

6.1. User perspective – Facebook use in everyday life

From talking with users you clearly get a picture of Facebook as a central communication tool used in their daily life, as Camilla (17) says: "*Every time you use your computer you go on Facebook*". Sometimes as a past time and procrastination in between homework and other things but also as a useful tool to keep up with friends and do collective discussions of study material and other practicalities. Thus, Facebook is a diverse communication tool that offers much more than just tools for presentation of the self. Many participants in the focus groups describe Facebook as a useful information source and a practical way to stay in touch with friends, be in the know about parties and also to manage school work, for example by discussing formalities and debating course literature other requirements. Helen explains the dependability of Facebook with an element of sarcasm:

"It is unavoidable. There is a critical mass that uses it, so if you don't – doesn't matter whether you think it's bad – you are – not socially handicapped – but close!" (Helen, 26)

That social network sites are unavoidable has been confirmed many times previously, not only by the high number of active accounts, but also in the way people use them as a central tool to express identity and to socialize (Boyd, 2007; Livingstone, 2008). Several participants of the focus group also describe how Facebook, at least to some extend, has taken over other types of digital communication like emails, texting and as Mads (25) say: "*It's a great source of information*". It is thus apparent in each focus group that the

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[10] Focus groups are particularly good at researching dynamic norms and values, as these are constructed and negotiated socially (Schrøder, Drotner, Kline and Murray, 2003; Belzile & Öberg, 2012).
[11] I will use the word 'participants' to refer to the participants of my focus groups throughout this paper

social network site is omnipresent in their daily life and a natural resource for information and interaction.

One of Facebook's merits has been to unite the virtual Internet with "Real Life" or the online with the offline. However, in the focus groups some differences are discussed, primarily regarding self-representation and design. First of all, it is concluded that friends on Facebook are not to be mistaken for real friends, a point that has also been previously highlighted by Ellison, Steinfield & Lampe (2011). Thus, many consider their audience on social network sites to be much broader than just the closest circle of friends; in fact so much so that addressing all of your Facebook friends can seem an absurd task in terms of relevance. Many participants discuss the somewhat narcissistic behavior characteristic of Facebook as something different and more explicit than offline interaction. But even though Facebook profiles project a somewhat one-sided and idealized self, it can also be a great way to examine and analyze how friends in your network want to be seen and how they actively try to maintain this image. Here Hogan's allegory of the exhibition (2010) makes sense in the sense that focus group participants often describe how they look at profiles and pictures from Facebook friends like analyzing a painting or a bricolages of art. Interestingly, however, this activity is often referred to as "stalking" as if they are looking without permission or exceeding someone's private boundaries. To some extend this activity often seem to leave the user with a guilty conscience which is not fitting within the exhibition metaphor. It seems as if participants are to some extend aware that many people are not managing their privacy settings adequately, and that they therefore might be trespassing personal property rather than entering into a purposefully designed public access exhibition.

6.2. Privacy settings

While most participants at some point have looked into the privacy settings, most do not remember their current setting and even the dedicated ones seem unsure whether their settings are up to date. Because of complexity and frequent changes to default standard, privacy settings on Facebook can seem like a puzzle. To some extend it is a question of literacy[12] as some participants admit to not being able to figure out the controls while others seem more confident. Most things related to privacy settings are considered "a lot of work", which is a sentence heard often in the focus groups. It does not mean the participants do not care about privacy, but rather that they use other types of preventive measures when they feel it becomes too complicated. Many alternative examples were given, for example managing who you friend in the first place as Jim explains:

"I don't have to think about what I write, because I don't friend people who are not allowed to know these things. That's how I keep things under control." (Jim, 18)

In an environment where privacy settings are complicated and constantly changing, maintaining an exclusive friend list seems like an easier alternative, though some information might still be available to a public audience. Presenting the participants with my public profile and discussing default settings made it apparent that many people have not even considered that they have a public profile. Often participants are excusing their lack of interest with the level of complexity or downplaying possible consequences leading to heated debates of perceived risk vs. level of complexity, which is an abstract and highly subjective debate. However, users who experience violation of contextual integrity seem more serious

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[12] This point is also supported by Papacharissi in "Privacy as a Luxury Commodity" (2010)

about managing their privacy settings. Maria describes an incident where she learned about privacy issues from watching others' mistakes.

"I went to Facebook to look up the person, and she does not have a limited profile. And I am like MY GOD, I can't believe how much information is actually publicly available on your profile. I am a complete stranger and have access to all this, and that's when I was made aware – OK I need to make sure that this much info is not accessible on my profile." (Maria, 26)

Many participants support this experience-based learning and Linda sums it up more generally.

"We think we are immortal, and that we can do anything. And that's what I really want to say, I don't think we give it a thought before it happens to ourselves." (Linda, 17)

6.3. Do the users experience a collapse of contexts?

What was very clear after the focus groups conducted in 2012 was that there seems to be a context collapse in the semi-public news feed and status message system. Every group seems to remember an earlier period where they were sharing more and thinking less about using the status update. What has changed is that friends or contact list have expanded, but also the norms of appropriate behavior seem to have tightened, thus complicating public interactions and sharing. Loosing face and being ridiculed for over-sharing, saying something embarrassing or showing lack of knowledge of contextual norms, has made most participants share less publicly. Many describe the current act of sharing as more practical and strategic than it was previously. Appropriate behavior now includes instrumental, strategic, funny and philosophical updates or updates including interesting knowledge and unique content through links where as inappropriate behavior might be egocentric or too intimate updates.

"You think a lot about every time you make an update, I do anyway. Is this to simple, how many would find it interesting? And sometimes you delete it again just after posting because – oh no this is too silly... It's annoying that the informal atmosphere has passed, when you could post a lot of things. That has to some extend disappeared." (Ditte, 27)

Many people describe how they have become more aware of the potential audience they write to, and how they feel a certain responsibility for contributing with something useful.

"I write very rarely, but when I do, I have an expectation that somebody will like it or find it interesting. And I guess it's a little sad but you sit and wait that someone will comment or something." (Jens, 23)

The 'like' button has for many people turned status messages into a sort of competition and legitimate quality measure. This has favored a certain type of updates, like humorous messages. Even though this might be good news, at least in a privacy context, many participants complain that Facebook is somewhat less playful than what it used to be.

"I think it is too bad that you feel constrained in what was the original purpose of Facebook. You can't use it fully, because you do not want to give a bad impression or because there is always something you have to think about." (Christine, 24)

Judging from participants' relation to the status update it does seem that the system might have developed somewhat, from its early playful stage, to a

more precarious and regulatory state as hypothesized by Lewis, Kaufman and Christakis (2008). But does this mean that people are embracing 'lists' or 'circles' to segment their communication and interaction?

6.4. Aspects, Circles or lists: Has the contextual privacy issue been solved?

To all participants the system of dividing friends and network into many subcategories and interacting in different closed environments seems overly complicated. The task of making 'lists' or using Google+'s 'circles' is considered a lot of work, and many expressed concern that these relations will change dynamically as friends transcend from work to close friend etc.

"I thought it ['lists'] was a clever system, when it came out, but I don't think I have ever segmented my status. If I want something out, I want everyone to know." (Søren, 31)

This point was emphasized many times, that if you want to post, you post to everyone. Participants did not like the idea of having to think about the audience every time. In general they preferred to post less, but to everyone when they did. Interestingly, Facebook's 'groups' function have been adopted widely by most participants and seems in many ways to replace some of the need for contextualization. Where 'circles' and 'lists' are interpreted as a complicated social segmentation and a much too rigid division of social relations, 'groups' are described as a more temporary and intimate. Also, it is not necessarily related to people's social status but rather dividing them by concrete hobbies, subjects and practical forums.

"In the 'groups', I post a lot. It's a closed forum, and you know exactly, whom you are posting to." (Linda, 23)
"Yes exactly, the problem is that you do not know who you are posting to, when you all of a sudden are friends with everyone." (Maria, 26)

7. Discussion

The participants of this study describe a development from a more playful use of social network sites towards a somewhat more self-regulatory phase of social network site usages also hinted by Lewis, Kaufman and Christakis (2008). The participants describe themselves as increasingly more precautious, disclosing information in broader contexts on Facebook, and usage is increasingly instrumental and practical. This should be good news for privacy researchers, as issues of contextual convergence on account of precarious user behavior on social network sites might be declining. From a user experience however the semipublic nature of Facebook is still a complex and somewhat confusing context. As the norms of appropriate Facebook behavior have tightened, people seem more reluctant to share and interact in broad contexts making features like the status message less desirable. This might be the natural progression of a more rational use of Facebook. Problems still occur though as people are struggling to find a perfect balance of modest but social behavior. To some extend privacy issues or boundary turbulence should be considered a natural part of social interaction (Petronio, 2002). But the important thing is that users have the agency to control and appropriate information technology by equipping them with the right tools as well as providing transparency of use and full disclosure of the informational flow. The contextualizing features of 'aspects', 'circles' and 'lists' address an important lack of control on social network sites, but fail to adequately reflect the dynamic and complex face-to-face privacy regulation and boundary control. Participants consider using these contextualizing features a lot of work, particularly since the rigid system of dividing your network into different groups might be in need of frequent

revision when social relations are constantly renegotiated and the flow of communication redistributed accordingly.

Users still do not seem to know or use privacy settings much though most have customized a little. In general adherence from disclosing seems a more popular solution to most privacy regulation in contrast to the technologic options. It is thought-provoking that so many participants are unaware of the amount of information they have publicly available and that many only handle privacy settings when they are confronted with actual threats. Younger participants typically make adjustments if they smoke without their parents' consent, and older participants typically make adjustments according to the type of work they expect to apply for. Such relations to authorities play a significant role in how much people adjust or disclose, but it is important to stress that everyone seem very interested in privacy regulation. What differ are the types of things people are willing to share in their network and whether they make privacy adjustment technically through privacy settings or mentally by not disclosing and sharing certain material. Some participants try to downplay the importance of privacy by arguing, they have nothing to hide, but this is a flawed argument, as everyone needs to and do regulate their privacy as part of self-presentation (Goffman, 1955) and basic social interaction (Altman, 1975). This misunderstanding is based on the perception that privacy is about secrecy, but as Altman (1975), Petronio (2002), Nissenbaum (2010) and many others have argued, privacy is a nuanced and natural part of being an individual in a social context. Participants of this study who seemed to have a very relaxed attitude towards privacy settings proved to care a great deal about what they initially choose to disclose in their open environment. Therefore privacy awareness is not just about adjusting settings on social network sites.

Nissenbaum describe social network sites as a medium that so far has not developed into an individual context with its own norms of informational flow, and thus must rely on preexisting norms of other media and offline interaction (2010). While her theory is a very useful tool in understanding privacy online it is logically somewhat (and self proclaimed) conservatively inclined. The number of new media platforms and the increasing speed of development makes it important for users in an adoption process to be able to quickly adapt and appropriate norms according to the design and flow of information made technologically available through that particular system. The fast adoption rate and heavy use of Facebook in its early ambiguous phase is a prescription to guaranteed privacy issues and potential violations of contextual integrity. We as researchers should pay particular attention to the earliest appropriation and development of norms within new media if we are to study emerging media as a fast developing "moving target" (Livingstone, 2004).

7. Conclusion
In conclusion, the contextualizing features of 'aspects', 'circles' and 'lists' address an important lack of control on social network sites, but fail to adequately reflect the dynamic and complex face-to-face privacy regulation and boundary control. While the 'groups' feature seems to be offering some type of contextualization, confusion still exists in relation to privacy settings in general and about how to act and what to write in the broad and semipublic forum of your broad network. From a designer's perspective one could argue that a simple and more dynamic system for contextualization is lacking. From a privacy view it seems that people are starting to act more thoughtfully in public and semipublic contexts. Nevertheless, users are still struggling to figure out *how* to act appropriately and negotiate norms in the social network context. One of the concerning factors still seem to be users' lack of interest in privacy settings, but more people are starting to see consequences short and long term of poor privacy regulation. It would be

interesting to gain greater insight into the early development process and social negation of privacy norms, on social network sites and in general, as users adopt new mediated tools of communication and social interaction.

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