

# Fighting for My Space: Coping Mechanisms for SNS Boundary Regulation

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## ABSTRACT

Sharing information online via social network sites (SNSs) is at an all-time high, yet research shows that users often exhibit a marked dissatisfaction in using such sites. A compelling explanation for this dichotomy is that users are struggling against their SNS environment in an effort to achieve their preferred levels of privacy for regulating social interactions. Our research investigates users' SNS boundary regulation behavior. This paper presents results from a qualitative interview-based study to identify "coping mechanisms" that users devise outside explicit boundary-regulation interface features in order to manage interpersonal boundaries. Our categorization of such mechanisms provides insight into interaction design issues and opportunities for new SNS features.

## Author Keywords

Boundary Regulation; Social Networking Sites; Coping

## ACM Classification Keywords

H.5.2 [Information Interfaces and Presentation]: User Interfaces – Evaluation/methodology;

## General Terms

Design, Human Factors

## INTRODUCTION

Facebook's CEO Mark Zuckerberg has said that sharing is our new social norm and believes that Facebook's role is "to constantly be innovating and be updating what [Facebook's] system is to reflect what the current social norms are" [14]. However, even though sharing personal information online appears to be at an all-time high, there is strong evidence that users are also dissatisfied with their online social interactions [10]. An explanation for this dichotomy may be found in Altman's seminal work, *The Environment and Social Behavior*: "if privacy and its associated mechanisms are ignored or rigidly incorporated into designs ...then people will have to *struggle against the environment* to achieve what they consider to be appropriate degrees of interaction" [3]. Social Networking

Sites (SNSs) are more than just websites; they are social environments in which we have to navigate how we interact with each other. Therefore, established theories of social psychology should be leveraged when designing these environments to facilitate optimal and desired levels of social interaction.

Altman's theories of environmental design for regulating social interactions in physical spaces are often referenced in Social Network Site (SNS) privacy literature but are rarely applied as principles of design for SNS interfaces. As a result, SNS users do struggle in their attempts to maintain appropriate levels of social interaction within their online social networks [10]. Therefore, coping behaviors are employed to reduce emotional distress when desired privacy levels have not been achieved [3]. As Ellison et al. note "privacy behaviors on SNSs are not limited to privacy settings" [7]. For instance, some SNS users create multiple Facebook profiles [20] to manage their information disclosure for different groups.

Our research investigates users' SNS boundary regulation behavior, and this paper focuses specifically on how users try to overcome functionality that does not meet their privacy needs. Through a qualitative study, we identify and categorize the myriad of coping mechanisms SNS users have developed to manage their social interactions. We define *coping mechanisms* as the behaviors developed by SNS users outside of the SNS interface or through the unintended use of interface features in an attempt to effectively maintain or regain their interpersonal boundaries. These round-about and often sub-optimal approaches give us insight into interactional design problems SNS users face when trying to socialize online. They also afford design opportunities for SNS developers.

## BACKGROUND

Privacy can be conceptualized as "an interpersonal boundary process by which a person or group regulates interaction with others," by altering the degree of openness of self to others [3]. Ineffective boundary regulation can lead to a state of social crowding or isolation, having much more or much less social interaction than one desires [3]. In these states, individuals experience stress and develop coping mechanisms to reduce that stress. Altman (also referencing Milgram) outlined a number of coping

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mechanisms individuals employ in the physical world in order to achieve acceptable levels of stimulation [3, 15]. They included reducing interaction through filtering, ignoring, and blocking as well as withdrawing from interaction or meeting it with aggression. For instance, crime, juvenile delinquency, homicide, and civil strife have all been related to social crowding and high population density. In some cases, individuals adjust their desired privacy level instead of trying to alter the social environment [3]. These categorizations corresponded closely to Horney's mature theory and coping strategies related to patterns of neurotic needs: compliance, aggression, and detachment [9]. Yet, manifestations of these coping mechanisms have not been examined within the context of SNSs.

While a breadth of research has addressed SNS privacy e.g [1, 5, 6, 7, 8, 12, 13, 16, 20, 21, 22, 23], very few researchers have examined coping mechanisms in response to undesirable privacy outcomes. Stutzman examined the creation of multiple profiles on social media websites, primarily Facebook, as an information regulation mechanism. Through grounded-theory, he identified three types of boundary regulation within this context (pseudonymity, practical obscurity, and transparent separations), as well as four over-arching motives for these mechanisms (privacy, identity, utility, and propriety) [20]. Tufekci examined disclosure mechanisms used by college students on MySpace and Facebook to manage the boundary between private and public. Findings suggest that students are more likely to adjust profile visibility rather than limiting their disclosure [21]. Lampinen et al. created a framework of strategies for managing private versus public disclosures. It defined three dimensions by which strategies differed: behavioral vs. mental, individual vs. collaborative, and preventative vs. corrective [12].

The related research in privacy and coping strategies often studies a specific coping mechanism in detail [20], uses students as a sampling frame [12, 21], and defines privacy in terms of private versus public information disclosures [12, 20, 21]. While this past research is closely related, our research differs in several distinct ways. First, we studied a variety of emergent coping mechanisms and applied existing social theory to our findings. Second, we felt that it was important to examine how a diverse set of adults coped in this new social environment, and sought a variety of non-student participants. Third, past research does not make a distinction between strategies readily supported by SNS interface capabilities and those that are not [12, 21]. Both coping and technology-supported strategies are types of boundary mechanisms for

regulating different types of interpersonal boundaries. We distinguish between *technology-supported boundary mechanisms* which are behaviors supported through SNS interface controls and *coping mechanisms* which are an individual's response outside of these confines to mitigate potential boundary interpersonal violations. Technology-supported boundary mechanisms are specifically designed to address particular boundary regulation needs through interface controls. For instance, untagging is a technology-supported boundary mechanism for managing photo sharing, while using chat to negotiate with friends which photos should appear online is a form of coping.

Finally, and most importantly, we do not characterize privacy as only a means to regulate private versus public disclosures. This conceptualization comes most readily from Petronio's well known Communication Privacy Management (CPM) theory, an extension of Altman's work specifically dealing with private disclosures [3, 17]. However, not all interpersonal boundaries revolve around disclosure. In a broader sense, interpersonal boundaries help us define who we are, who we interact with, how and when. Our previous work identified the different types of interpersonal boundaries users need to manage within their SNSs [10]. Table 1 summarizes our taxonomy. We found that in addition to *disclosure* boundaries, SNS users can also negotiate *relationship*, *network*, *territorial*, and *interactional* boundaries to regulate their privacy levels. For instance, rejecting a friend request defines a *relationship boundary*. Hiding annoying posts from a friend's game application helps regulate *inward-facing territories* (such as one's News Feed), but has nothing to do with whether or not the information was considered private [10]. Therefore, when we discuss coping mechanisms for interpersonal boundary regulation in this paper, we included coping behaviors from this broader perspective instead of limiting our scope to public and private disclosures.

## METHODOLOGY

We conducted semi-structured interviews of SNS users on how they manage their social interactions online. For instance, we asked participants how they managed friending and unfriending, overlapping social circles, personal disclosures, updates from others, and conflicts within their SNS. Participants were asked to base their responses on actual past experience as opposed to speculating what they would do given a particular scenario. We did this because previous research suggests a "privacy paradox," where an individual's stated privacy concerns do not necessarily correspond to their actual behavior [1].

**Table 1: Taxonomy of SNS Interpersonal Boundary Types**

Boundary Type	Dimensions	Definition
Relationship	Connection	Regulating whom to let into one's social network
	Context	Regulating appropriate interpersonal interactions given the type of relationship
Network	Discovery	Regulating access others have to one's network connections
	Intersection	Regulating social interactions between connections or groups of connections
Territorial	Inward-Facing	Regulating incoming content for personal consumption
	Outward-Facing	Regulating semi-public content available through interactional spaces
Disclosure	Self-Disclosure	Regulating what personal information one discloses within one's network
	Confidant-Disclosure	Regulating how co-owned personal information is disclosed within one's network
Interactional	Disabling	Regulating potential interaction through turning on/off interface features
	Blocking	Regulating overall access of oneself to specific individuals outside of one's network

Interview participants were recruited between September 2010 and July 2011 via postings on Facebook and email. Interviews were conducted via Google Voice, Skype, or email. Interviews were transcribed using InqScribe and qualitatively coded using Atlas.ti 5.5. As a foundation, we used Altman's definition of coping along with our conceptual distinction between technology-supported boundary mechanisms and coping mechanisms. Next, we applied open coding [19] to uncover different types of coping behaviors exhibited by our participants. These codes were then conceptually grouped based on the coping mechanisms outlined by Altman to determine if similar coping mechanisms were observed in SNS environments. Quotes and anecdotes from participants are presented using a pseudonym first name for anonymity, profession, and age then consistently used throughout this paper.

### Participants

We collected interview data from 21 participants, 10 females and 11 males. Participants were recruited through Snowball sampling [4] via email and Facebook. In order to participate, they had to be over 18 years old and have been an active member of a social networking website (such as Facebook, MySpace, LinkedIn, etc.) within the past year. Thirteen interviews were audio recorded, averaging 58 minutes each. Eight interviews were completed via email with follow up questions totaling 50 single-spaced pages (out of over 200 pages of transcripts overall). The average age of our participants was 36 years old, ranging from 21 to 60. Only one of our participants was a student with others ranging from an administrative assistant, minister, dating coach, photographer, restaurant manager, security officer, to a stay-at-home mother. Participants primarily used Facebook, with 16 participants

logging in daily and four participants logging in weekly. Six participants reported using MySpace weekly to annually, and three said they used to have MySpace accounts but had deactivated them. Eight participants reported having Twitter accounts, and six participants had LinkedIn accounts. Participants also reported being active on a variety of other SNSs, including Ning, Hi5, LibraryThing, Shelfari, and Xanga. One participant was active through his wife's Facebook account, but chose to refrain from creating any SNS account of his own due to privacy concerns.

### RESULTS

The interviews confirmed our priori codes were present within SNS environments; filtering, ignoring, blocking, withdrawal, aggression, and compliance are all coping mechanisms previously identified as ways to reduce emotional stress and anxiety [3, 9, 15]. However, the specific behaviors associated with these mechanisms drastically differ from the physical world. To Altman's coping mechanisms, we added one additional coping strategy – compromise. While we originally sought to match each coping mechanism to the boundary regulation taxonomy we had previously defined (Table 1), we found that many strategies were used across various boundaries. However, for the most common trends we observed, we will relate the coping mechanisms to the boundary types.

#### Filtering

“Reduction of intensity of inputs by *filtering* devices [3, 15]” was a coping mechanism participants often used specifically when regulating their *relationship boundaries* such as choosing with whom to connect and managing SNS interactions based on relationship context [10]. Filtering as a means for relationship boundary management may be one way participants avoided

“overmanning,” which occurs when the capacity of a space is exceeded by the number of applicants. In other words, there are more people than the setting can handle. This “results in pressure to reduce applicants, raise the standard for those admitted, or increase the setting capacity” [3]. Even though SNS participants are not confined due to physical space, many of our participants found that social networks that were too large became too cumbersome to manage.

*“I pretty much let everybody in, so it is tough to manage. I’ve got 1600 [Facebook friends] now. . . Within the last week I think I’ve had 100 new people so I can’t manage it. . . it is just too much.” –Tyronne, Photographer, 31*

Therefore, some individuals coped with this problem by leveraging small social cues as filtering devices for relationship management. For instance, four participants noted that they use a person’s profile picture as a way to decide if they would accept or deny a friend request from someone they did not know.

*“If it is a picture of somebody and they are half naked in it, then I don’t accept it. So if you are showing your boobs in your picture, I am going to say no to that. Those I will turn down if it is obvious, but if it is not obvious, I will accept it.” –Kristine, Author, 37*

Two participants relied on relationships with mutual friends when determining if they would form a new relationship connection.

*“If we have absolutely no friends in common, I will not accept it at all.” –Lynn, Photographer, 30*

Overall, the reliance on such minor social cues when determining whom to friend reveals that SNS users must sometimes use sub-optimal mechanisms when developing criteria for filtering potential relationship connections. Therefore, in addition to social cues, SNS users have developed other filtering mechanisms. Our previous work showed that group management within one SNS account was rarely used for regulating social interactions [10], instead SNS users segregated friends through separate SNS profiles or even different SNSs. Consistent with past research [20], four of our participants explained the need for two SNS profiles within the same SNS to separate personal interactions from work.

*“I chose to keep my work and play profiles separate. I don’t need any [co-workers] reading my work rants!... I don’t accept any friend requests on my [work] page from real friends, and vice versa.” –Tia, Administrative Assistant, 37*

Four other participants mentioned accepting different types of friends on different SNSs (i.e. Facebook versus

LinkedIn) in order to maintain appropriate network intersection boundaries.

*“I, for example, do not have some IRC friends on Facebook since they smoke marijuana. I do not. . . I keep them on MySpace, mainly so they don’t make me look bad, as well as harass the attractive friends I have [on Facebook] when they are high.” –Allen, Technical Services, 31*

The use of separate profiles or different SNSs to manage social interactions by *relationship context* possibly reduced the cognitive filtering process instead of doing so within one SNS account. A disadvantage of using relationship management filtering as one’s primary boundary regulation mechanism was the upfront time investment required to properly leverage this technique. Consistent rules for filtering need to be developed from the onset because implementing them after-the-fact is often difficult to do.

*“It is so hard to do at this point. If I had started off that way, I think it would have worked. [Some authors] use the fan page just for fan stuff and their regular Facebook page just for people they really know. But I think at this point I have over 1000 friends on Facebook that it would be impossible to separate it out.” –Kristine, Author, 37*

### **Ignoring**

When individuals are presented with more information than they have the time or cognitive ability to process, they tend to make satisficing decisions versus optimal decisions due to their limited capacity [2, 18]. In addition to experiencing social crowding, more social interaction than one desires [3], participants also struggled with information overload which was exacerbated by the amount of content enabled through SNSs. Often, individuals felt overwhelmed by the amount of interaction they could engage in or information they could consume within their online social networks.

*“I don’t see how people can maintain if they have 1,000 friends. If I had 1,000 friends and 1/4 them are posting, I mean that is 250 posts a day. I am trying to keep it at a reasonable number.” –Gordon, Restaurant Manager, 48*

An identified coping mechanism for this is a “disregard of low-priority inputs which results in *ignoring*,” giving attention only to interactions that have direct, personal meaning [3, 15]. Within SNSs, ignoring is most strongly associated with *inward-facing territories* such as one’s Facebook News Feed. Eight of our participants mentioned reducing the amount of attention they paid to News Feed content. They skimmed or ignored incoming content because they characterized it as “annoying” or “too much,” and they did not feel it pertained directly to them.

*“It's a really long list that I haven't read yet, and I'll just read the first, whatever comes up on the screen, and I won't use the scroll bar. If it's something that I needed to know, they would have contacted me directly. They would have either sent me a message on Facebook or a text or a phone call or an email. Chances are if they didn't do that then I really didn't need to know it.” –Lorrie, Security Officer, 22*

Alternatively, three participants actually expected their friends' to ignore (or hide) them if they did not like what they posted or were annoyed by over postings. That way, they did not have to censor what they wanted to post. However, a negative consequence of ignoring was that SNS users often missed important information that was shared within their networks which, at times, resulted in hurt feelings. For instance, Gordon recounted how he felt when one of his close friends who was also in his Facebook network missed his posts about his daughter's heart surgery:

*“She had so many friends that mine was just another post. It had obviously slipped through the cracks. It hurt a little bit thinking that, hey, I am reading your posts but you are not reading mine.” –Gordon, Restaurant Manager, 48*

### **Blocking**

Individuals who feel filtering and ignoring are not adequate coping mechanisms may escalate to blocking [3, 15] Interestingly, blocking is a feature that is built into most SNS interfaces that we characterized as an *interactional boundary mechanism*; however, individuals rarely take advantage of this technology-supported boundary mechanism [10]. Instead, they develop coping mechanisms for blocking unwanted interactions with others. For instance, Dollie and Alana use pseudonyms on Facebook even though the SNS encourages individuals to use their real names.

*“I changed my name because I was hiding. I wanted to be less able to be found. I changed my name, but it didn't work. Because then I realized that people were finding me under other people's names ...My sister was still able to find me.” –Dollie, Mother, 34*

Another way SNS users block interactions with others is by using someone else's Facebook account and never creating their own. Richard does not have an SNS account but logs into his wife's Facebook account more often than she does; Becky's husband benefits from her SNS interactions in a similar way.

*“My husband does not have a Facebook page. He doesn't understand why I check it all the time but does enjoy the 'gossip' when I tell him about recent updates. He sometimes asks me to check his sister's or brother's status*

*to figure out where they are, if he can't get in touch with them ...(I think he just feels left out!)” –Becky, Elementary School Teacher, 29*

Blocking through the use of pseudonyms or someone else's account can effectively remove unwanted social interactions while allowing one to still participate as part of an SNS. However, blocking as a coping mechanism often does not derive the same level of benefits enjoyed by others. Both Richard and Becky's husband (according to Becky) feel isolated from others by not having their own SNS accounts where they can be active participants.

Due to the high potential for boundary violations, four participants felt that proactive and retroactive blocking were not enough to protect them from negative consequences. Therefore, they were forced to find ways to constantly monitor their *outward-facing territories* and *confidant disclosures* so that they could block any threats in as close to real-time as possible. Kristine used social aggregators such as TweetDeck to monitor her MySpace comments. Tyrone and Tia frequently checked Facebook from their mobile phones.

*“When I do get comments or tagging pictures or something that comes to my phone and says hey, so and so commented. If it is something that I am like 'this is not kosher,' then I can logon and delete that comment.” –Tia, Administrative Assistant, 37*

### **Withdrawal**

*Withdrawal* is characterized as an “allocation of less time to each of the many inputs” [3, 15] in which an individual can interact or a general unwillingness to help others [3]. Individuals withdraw to distance themselves from perceived threats in order to avoid harm [9]. Our participants showed evidence of withdrawal through self-censorship, detachment, and retreat. Seventeen, almost all, of our participants felt that they needed to censor what they shared within their SNS. Because most of them do not limit their sharing based on *relationship context* [10] through the creation of friend lists or groups, they used the heuristic of only sharing what was appropriate based on everyone in their network seeing it. Therefore, *self-disclosure* was reduced to the lowest common denominator and stripped of personal intimacy.

*“There's certain things you maybe want to post about, but there's people on there that you maybe really don't want to know that, or you don't really want to share that with, so yeah, I've censored myself and/or not put things on there that I would have otherwise.” –Nelson, Office Manager, 53*

In this case, Nelson was unaware that he could limit the visibility of posts on Facebook to specific friend lists using existing controls. In other cases, individuals

censored themselves in the present out of fear that those interactions could persist and harm them in the future.

*"You don't want people to get things that they can hold against you. It's difficult because you post something and you are friends with someone, or a company you want to hire you comes and looks at it and then your relationship with that person or company changes and what was ok before isn't ok now."* –Lorrie, Security Officer, 22

Therefore, many participants compensated for this by only accentuating the positive when sharing within their SNS. Eight participants said they suppressed any negative thoughts or feelings and only shared content they felt was positive or humorous. In fact, they frowned upon other people not doing the same.

*"Some people use it as a diary. I would not do that. I would not tell how I feel...if I say anything on my wall it is going to be either, one, that I am going to complement something that someone else already said ...or it's going to be something positive. I feel like I will never put anything that has negative energy on my wall."* –Tyrone, Photographer, 31

In addition to censoring themselves, six SNS users managed their boundaries by carefully staying out of any conflict they observed between others.

*"I don't usually interject myself in those kind of posts. I figure somebody's upset somebody but I really don't need to know about it."* –Regina, HIV Awareness Coordinator, 60

In a sense, this was their way of withdrawing by "shifting social transactions to others" [3, 15], by offloading the responsibility of managing conflict to others. However, when avoiding conflict was not a successful mechanism for maintaining their boundaries, some participants resorted to retreat. They created *interactional boundaries* of retreat through dropping off conversation threads, not logging in to their SNS, or even deactivating their account completely. For example, Gordon and Edward abandoned arguments that were started on Facebook for a time or indefinitely.

*"What I do is I just back off and try to come back to it later. And just say 'Ok, This conversation about the ethics of termination of unborn children is not a really a conversation I'm happy having right now. ... I probably need to take a step back.'" –Edward, Youth Minister, 30*

Kristine explained that she needed a break from her SNSs when she could not maintain a positive persona for her readers.

*"I do take Twitter Holidays or Twitter-cations where you don't go on for a while. Same thing with Facebook. Sometimes if I am feeling down or depressed, I don't want to go on Twitter and Facebook. One of the bad things about having all these people who are fans or whatever or that aren't family and friends, who are in a third category is that they expect you to be on and up and they don't expect you to have doubts or things like that."* –Kristine, Author, 37

Alana has deactivated and reactivated her Facebook and MySpace accounts on multiple occasions as she is generally ambivalent about online social networking, believing that its main purpose is to violate one's privacy.

*"I get on it to start off with, save all my good friends, even post updates to start off ...then my friends and I catch up in real life, have our girlfriend powwows and the pizzazz of the site goes away. I don't use it, realize over and over that my most meaningful relationships benefit little from social networking, and I stray away from the site."* –Alana, Substance Abuse Counselor, 28

Dollie completely deleted her Facebook account until after her daughter was born. This happened because an acquaintance inadvertently disclosed to Dollie's network that Dollie was pregnant before Dollie herself was comfortable revealing the information. Dollie believes that when Facebook becomes more of a nuisance than a positive social outlet, the best thing to do is to remove herself from it completely.

*"If I don't like Facebook, if I don't like being there, I could as easily get out of it. I can just delete the whole thing and leave. Delete is fabulous. I can delete you or delete myself and all my issues go away."* –Dollie, Mother, 34

Self-censorship, detachment, and retreat are ways that SNS users withdraw from social interactions within SNSs, often when they feel there are no other ways to engage without being harmed. Withdrawal is an extreme coping mechanism for protecting oneself by limiting one's own behaviors in contrast to blocking which limits the actions of others. In both cases, social interaction is limited because the cost of interacting is perceived to be higher than the benefits.

### **Aggression**

Filtering, ignoring, blocking, and withdrawal are all characterized as defensive coping mechanisms. However, some SNS users resort to offensive measures within their SNSs in order to hurt others. *Aggression* is a coping mechanism where individuals threaten those they perceive as a threat in order to protect themselves [9]. For instance, aggression due to social crowding in physical spaces may

manifest as violence or verbal behaviors [3]. However, within SNSs, aggression is a coping mechanism that tends to be used to seek revenge in a covert yet public way, leveraging *outward-facing territories* such as Wall posts. Interestingly, aggression within SNSs was a response to neurotic needs of acceptance and approval [9] instead of social crowding [3]. SNS users leveraged aggression to get attention or enhance the level of social interaction within their networks, even if the interaction was negative. Seven participants explained using or having a friend use a status update to all of their friends as a way to retaliate against one particular person and garner attention or sympathy.

*“[My boyfriend’s daughter] would make a comment on her Facebook page to look at it would be kind of general but then for us to read it to know what situation she’s talking about it is like wait a minute why are you putting our business out on the street? It is more of a connotation, I am not saying your name, but I am talking to you.” – Tia, Administrative Assistant, 37*

Kurt went as far as to create a separate Facebook page and change his profile visibility to Friends of Friends in order to make his ex-girlfriend jealous and regret breaking up with him.

*“I had the bachelor of the year thing which was a good way to get back at her and say look, you gave this shit up. Now all your friends are going to see. They would say it why did you walk away from that he has all these other qualities and he is hot too?” –Kurt, Dating Coach, 32*

Aggression also surfaced, at times, when SNS users enjoyed generating discussion and even causing conflict between their friends, possibly even pitting them against one another and intentionally converging one’s *network intersection boundaries*. Regina, Larry, and Dollie often found entertainment value in starting political arguments on their Facebook Walls. Edward and Nelson often encouraged religious debates. Kurt, in general, liked provoking his audience as a means of personal promotion and even used them to bolster his own causes.

However, being the target or even just witness of others’ aggression certainly has negative consequences. Having experienced some form of aggression in the past, participants tended to have a tainted view of SNSs as environments that breed drama and revert adults back to juvenile tendencies. Six participants emphasized the need to avoid the “drama” present within online social networks.

*“The site causes enough drama, as it is, or rather the people on the site using it in nefarious ways. Same thing for Myspace and all the others.” –Allen, Technical Services, 31*

## **Compliance**

*Compliance* is a “self-effacing solution” to boundary turbulence and leads to sacrificing one’s own needs to accommodate others and avoid harm [9]. Altman explained that individuals do this in response to, “repeated failures to achieve a balance between achieved and desired levels of privacy” [3]. Often, compliance was implemented without any boundary discussion with others; therefore, adjustment towards more mutually acceptable boundaries would not occur in the future. Six participants admitted to adjusting their boundaries and relinquishing their interactional privacy needs to please others. This resulted in changing their disclosures, friending and unfriending preferences, and even their offline behaviors to account for the inevitable sharing within their social networks.

*“I am worried what people say or tag of me or whatever, so I do not engage in as many crazy drinking sessions with people who might not execute the best judgment when uploading, or the very least, marking who has access to view the more unsuitable photos. I do not say or do crazy things with my friends in town (usually) and keep some things I might normally share by my nature, to myself, so it doesn’t end up on Facebook.” –Allen, Technical Services, 31*

Being able to properly maintain one’s interpersonal boundaries is important for self realization and healthy relationship management [3, 9, 11, 17]. Therefore, over accommodation of others could result in a perceived loss of control over one’s social interactions. As Allen admitted above, he feels that he cannot always be himself, even offline, due to the online interactions that may occur as a result.

## **Compromise**

Many SNS behaviors we saw, as illustrated above, fit nicely within the coping mechanisms previously identified by Altman for dealing with stress in social environments [3, 15]. However, Horney identified one “healthy” coping mechanism to meet neurotic needs that Altman did not mention. *Compromise* [9] involves the interpersonal process of communicating, agreeing, disagreeing, compromising, and reaching mutual decisions. In effect, compromise is the primary mechanism for regulating interpersonal boundaries instead of satisficing through compensatory actions. We observed boundary coordination through compromise in our study, but ironically, this coordination almost always happened *external* to the SNS environment. SNS users found ways to use offline or private communication with others in order to coordinate boundaries beforehand (as a preventative strategy [12]), and subsequently (as a corrective strategy [12]). When SNS users were confronted with interpersonal conflict or negative social interactions, they made a point to take the interaction off

of *outward-facing territories* to other more private mediums. It was important to our participants to not allow interpersonal conflict to be visible to everyone within their networks. Communication was initiated either through the SNS's private email messaging capabilities or by more direct communication such as calling or face-to-face conversations.

Compromise through boundary coordination was most frequently observed for photo posting or tagging, which were part of *confidant disclosures* in our boundary mechanism taxonomy. Besmer and Lipford examined photo tagging and untagging behaviors in detail on Facebook [5]. In most cases, coordination happened before the photo was posted. Generally, people were very accommodating when it came to posting and tagging photos of others. However, photo tagging was also a point of contention where most SNS users said they had untagged a picture of themselves in the past. (Note: Our interviews were conducted prior to Facebook's recent changes that allow tag review.)

*"I texted her and asked her if she wanted me to email her the pictures or did she want me to tag it? I wanted to tag it because I thought it was a hot picture. She said no no you can't tag it, I am about to graduate . . . The shoot didn't show any nudity or anything. I think it was just really tight clothing, and it was really sexy but she did not want that to get out. She said that no do not ever tag me and that image."* –Tyrone, Photographer, 31

We also observed this process when setting *relationship connection boundaries*. Becky and Dollie told co-workers in person that they did not accept friend requests from co-workers so as to manage their expectations.

*"I don't want to have coworkers on my page ... I would say it at work, 'oh no, don't send me a friend request because I don't allow coworkers on my page.'"* –Dollie, Mother, 34

While the primary response to conflict was to withdraw, an alternative strategy 13 SNS users employed was private confrontation for reconciliation. However, the effort to reach a compromise or truce was reserved for close friends as opposed to acquaintances. A benefit of this approach, however, was that SNS users were often able to resolve misunderstandings instead of ending the relationship or propagating drama within their SNSs.

*"If it [conflict occurring] was just in my news feed, I would filter them out, if it was on my wall, I would probably just unfriend them unless they were a close friend, then I would ask them to stop."* –Fred, Sales Manager, 33

## DISCUSSION

We have created a framework of SNS coping strategies by identifying analogous online behaviors to theoretically based, offline coping mechanisms. Filtering, ignoring, blocking, withdrawal, aggression, compliance, and compromise are all strategies SNS users have developed in an attempt to achieve their desired level of privacy and social interaction outside of the use of traditional SNS privacy controls. Table 2 summarizes the types of coping mechanisms described in this paper, gives a specific example, and relates the example to types of interpersonal boundary management.

**Table 2: Coping Mechanisms with Examples**

Coping Mechanism	Example ( <i>Boundary Type</i> )
<b>Filtering</b>	Creating two separate SNS profiles to segregate different circles of friends ( <i>Relationship Context</i> )
<b>Ignoring</b>	Skimming or ignoring one's News Feed ( <i>Inward-Facing Territorial</i> )
<b>Blocking</b>	Using a pseudonym so that others cannot find oneself ( <i>Interactional/Relationship Connection</i> )
<b>Withdrawal</b>	Censoring oneself ( <i>Self-Disclosure</i> )
<b>Aggression</b>	Intentionally starting arguments between one's friends ( <i>Network Intersection/Outward-Facing Territorial</i> )
<b>Compliance</b>	Accepting almost all friend requests and rarely unfriending ( <i>Relationship Connection</i> )
<b>Compromise</b>	Confirming that it is okay to tag someone in a picture ( <i>Confidant-Disclosure</i> )

Such adaptations suggest, first, that social interactions through SNSs frequently cause emotional distress that users feel the need to mitigate. Second, it suggests that SNS environments are not optimally designed to be responsive and flexible to SNS user privacy needs. Third, such coping mechanisms tend to produce sub-optimal social outcomes such as neurotic tendencies [9] and additional stress. With the exception of compromise, these coping strategies tend to be maladaptive, where short term stress may be decreased but potentially at the cost of increasing long term stress [9]. For instance, feeling like you constantly have to monitor your SNS, participate using a pseudonym, or even change your offline behavior due to potential SNS interactions are

generally not beneficial coping behaviors and can be stressful in and of themselves.

As an example, Dollie, who is an extreme filterer when it comes to *relationship connection boundaries* (not allowing family or coworkers into her network) does so because she has been hurt in the past. She only has 62 Facebook friends and unfriends often in order to avoid conflict or compromise. However, this coping behavior reduces her opportunity to forge deeper relationships with these individuals through her SNS at any point in the future. Individuals like Kurt and Tyrone, who use their SNSs for professional marketing, often ignore their News Feed, or *inward-facing territories*, due to the sheer volume of status updates from their extremely large networks, and miss important updates from true friends. Therefore, while they welcome others to interact with them, they rarely engage others in the same level of interaction in return, possibly making others feel ignored or unimportant. Individuals who withdraw emotionally through self-censorship tend to express a dissatisfaction of not being able to present an authentic self to others and feel a reduced sense of intimacy within their SNSs.

In addition to these coping behaviors, all of our participants exhibited the use of *incongruent boundary mechanisms* given a boundary goal. For instance, if someone is not one's friend, a congruent boundary mechanism would be to unfriend them. Thus, an appropriate relationship connection boundary would be established. However, the most common incongruency we observed was when SNS users crossed *relationship connection boundaries* with *inward-facing territorial boundaries*. For example, quite a few participants hid someone from their News Feed who was no longer a friend, while others unfriended a real friend due to an annoyance such as over-posting. In most cases, when a boundary mechanism was incongruent with the boundary goal, it also created potential for negative consequences. For instance, hiding someone still allows that person access to one's network, personal disclosures, and future interactions. Inversely, unfriending someone who is truly a friend removes the possibility of future interactions that could strengthen the relationship, and could even harm the relationship by emotionally hurting the other person.

Understanding SNS coping mechanisms can help pinpoint areas where improved interface design can potentially enhance online social interactions. Our findings can inform design guidelines that can improve SNS interface support for interpersonal boundary regulation. For instance, SNSs could support one's relationship connection filtering process by requiring more information as to the motivation one wants to connect with another. This would have saved Gordon from significant emotional torment when a high school bully friend-requested him on Facebook.

*"He used to bully the shit out of me in high school. I am looking at him, and I am thinking, why in the world would he send a friend request to me when he tortured me in high school? I really struggled over it, and I was about to decline him actually. I decided to say yes, to see what's going on ...the next day he sends an email in which he apologizes for the grief that he gave me through high school."* –Gordon

SNS interfaces would also benefit from better *inward-facing territorial boundary* support to reduce cognitive overload from updates streaming in from one's friends. For instance, many Facebook users reported frustration that Facebook controls who they see in their News Feed instead of allowing them to do so themselves. Because SNSs often take control of boundary regulation for end users, they have to find ways to regain control. For instance, when Edward wants to see a particular friend show up in his Facebook News Feed, he makes sure to post a comment on their Wall so that the recent interaction bumps them into his Top News. To address this problem, in September 2011, Facebook just rolled out a change to filter one's News Feed by different friend lists.

Overall, the biggest gap our study highlights in SNS interface design for boundary regulation support is a lack of built-in capabilities to compromise by actively negotiating one's boundaries with others. SNS users are forced to use communication mediums outside of the SNS interface to coordinate interpersonal boundaries with others. Therefore, the SNS environment is not responsive to these needs. SNS interfaces, such as Facebook, are designed to encourage sharing and being open, and de-emphasize boundary coordination. For instance, many of our participants expressed anguish over having no closure from being unfriended. SNSs do not notify and certainly do not facilitate communication to explain why the relationship was severed or attempt to reconcile conflict. There also are no tools for explicitly signaling or collaboratively negotiating disclosure for co-owned information such as pictures and tags. SNS users have to resort to external coordination though such means as private messaging or face-to-face conversations. By integrating this negotiation process into SNS interfaces in positive ways, it could facilitate and make online boundary regulation a more socially acceptable process.

## **CONCLUSION**

Now that individuals are interacting online instead of merely sharing information asynchronously, it is important to reapply existing psychology of social interaction and behavior to virtual, social environments. This research applied social theories of interpersonal boundary regulation through boundary and coping mechanisms to the unique social environments of SNSs. We found that filtering, ignoring, blocking, withdrawal,

aggression, compliance, and compromise represent coping mechanisms individuals use within SNSs to maintain their interpersonal boundaries. In many cases, coping and incongruent boundary mechanisms created sub-optimal social networking experiences or introduced unnecessary complexity, which in turn reduced end user satisfaction with the SNS and negatively impacted their social interaction with others.

Hence, when SNS users employ coping strategies, this can signify opportunities for improved interactional interface design. Integrating, improving or realigning boundary mechanisms supported by SNS interfaces could actually enhance relationship development. Privacy through effective interpersonal boundary regulation serves as a way to improve how individuals connect and share with others. In contrast to definitions that tend to depict privacy as a means restricting information disclosure and promoting social withdrawal [7, 21, 23], a direct negation of social networking goals, interpersonal boundary regulation can increase one's level and quality of engagement through SNSs. Therefore, improved interface design to better support interpersonal boundary regulation could serve to improve, instead of prevent, higher levels of social interaction. Our future research will continue along this path - to examine interpersonal boundary regulation within online social networks as a means to align interactional privacy needs with social networking goals.

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