

Platforms, People, and Perception: Using Affordances to Understand Self-Presentation on Social Media

Michael A. DeVito
Northwestern University
Evanston, IL, USA
devitom@u.northwestern.edu

Jeremy Birnholtz
Northwestern University
Evanston, IL, USA
jeremyb@northwestern.edu

Jeffery T. Hancock
Stanford University
Stanford, CA, USA
hancockj@stanford.edu

ABSTRACT

The popularity of social media platforms today makes them an important venue for self-presentation, but the unique affordances of these platforms challenge our existing models for understanding self-presentation behavior. In particular, social media provide multiple platforms on which the self may be presented, expand the role other individuals can play in one's own self-presentation, and expand the audience while often simultaneously providing less information about who is in that audience. This paper presents an affordance-based approach to self-presentation on social media platforms rooted in these three challenges and presents a systematic taxonomy for considering aspects of platforms that affect self-presentation. Results from an exploratory study of 193 users suggest significant variation in user perception of our proposed affordances across social media platforms, participant experience levels, and participant personality traits.

Author Keywords

self-presentation; social media; affordances; platforms; experience; personality; audience; face threats

ACM Classification Keywords

H.5.2. Information interfaces and presentation (e.g., HCI): User interfaces - Interaction styles.

INTRODUCTION

As social media platforms have become a common feature of everyday life [47], they are now often a primary vehicle for people to present themselves to others [13, 27, 36]. In contrast to more traditional modes of self-presentation, however, social media platforms can be more complex, give one's contacts a more salient role in the self-presentation process, and obscure the audience to whom content may be visible. For users, this means self-presentation tools and tactics that are harder to understand due to their increasing complexity [9, 35] and that at the same time can have even

higher stakes, as consequences for social media errors have included things like embarrassment and regret [26, 36], loss of work [64] and unsolicited abuse [65].

As this becomes increasingly complex, there is evidence that – unlike in face-to-face interactions – conventional social skills may not be enough to navigate the complex waters of online self-presentation [27, 34, 36]. Specifically, skills, experience and personality traits can affect self-presentation and its consequences in novel and unexpected ways (e.g., [35, 36, 54]).

As researchers, however, we are ill-equipped to help people make sense of self-presentation in a networked world, because these novel attributes of social media platforms push at the bounds of our existing theories and frameworks for understanding self-presentation. Many studies have examined online self-presentation through investigating platform features (e.g., [24, 30]), interfaces (e.g., [4, 7, 9, 37]), or user perceptions of individual platforms (e.g., [36, 66]). However, we lack a common vocabulary for systematically evaluating, discussing and understanding features or attributes that transcend specific platforms and contexts. Such a vocabulary would allow us to 1) look at self-presentation phenomena that occur across social media platforms, 2) bring into focus the key differences that define individual platforms, and 3) better assess and understand people's ideas about how social media platforms work.

There is substantial utility in a systematic, affordance-based approach to self-presentation on social media platforms. As Ellison and Vitak [16] note, affordances can allow for higher-level discussion of capabilities provided to users by social media platforms, in a manner that transcends specific platforms or technologies [16, 19, 20, 57] while focusing on the relationship between technical features and user perceptions [19, 20]. Affordance approaches thus far have been limited to specific domains, such as the workplace (e.g., [57]), particular platform functions (e.g., networking [8]), specific processes (e.g., social capital [16]), or specific platforms, especially Facebook (e.g., [30, 36, 37, 53]).

In the paper that follows, we present an affordance-based framework for understanding self-presentation on social media platforms. To explore the utility of this framework we present results from a survey of 193 users of six common platforms that examines user perceptions of these affordances. Results suggest that there is meaningful variation in perception among users across social media

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from Permissions@acm.org.

CSCW '17, February 25-March 01, 2017, Portland, OR, USA
© 2017 ACM. ISBN 978-1-4503-4335-0/17/03...\$15.00
DOI: <http://dx.doi.org/10.1145/2998181.2998192>

platforms and for people with different experience and personality traits. We argue this framework can be used to systematically discuss and compare self-presentation across social media platforms, to understand how differences between users may further complicate self-presentation, and by designers as a way to consider support for various elements of self-presentation.

BACKGROUND

Affordances have been defined broadly, with several different but conceptually-related definitions in use within the social computing literature. We root our work in Faraj and Azad's definition [19], defined in [38] as "*the mutuality of actor intentions and technology capabilities that provide the potential for a particular action.*" This notion of affordance has been used by Ellison and Vitak [16], Treem and Leonardi [57], boyd [8] and others to describe social media specifically, and focus on higher-level characteristics across platforms [16]. As such, we believe this definition is best suited to building a high-level framework.

Critical to any discussion of affordances is their perception by users [46]. If people do not see or understand that a particular behavior is possible, they are unlikely to engage in that behavior (except by accident). Perception of affordances is, in turn, a function of both the perceptibility of the system features or design, and attributes of the user that may affect the probability that they will notice or understand specific affordances [20].

It is useful to conceive of self-presentation affordances in light of three challenges social media present to conventional theories, which conceive of self-presentation as an interaction between the projection of identity by the self and others' response to that projection [21]. On social media platforms, self-presentation occurs through complex socio-technical interactions involving *the self*, empowered *other actors* (i.e., contacts or friends), and computational systems that can obscure understanding of *the audience*.

The Self

The first challenge to conventional treatments of self-presentation stems from changes to the role of the *self* being presented. In contrast to traditional self-presentation tactics, such as appearance, manner and behavior [21], social media platforms provide a novel set of tools and features that people can use to present themselves to others. These include individual profiles, novel content (e.g., status updates), repurposing of existing content (e.g., retweets), and one-to-one or one-to-many messaging. Different platforms also vary in functionality regarding the persistence, discoverability and ephemerality of content about the self, ranging from the persistent visibility of content on platforms like Facebook and Instagram to the ephemerality on platforms like Snapchat [4, 67]. Persistence of individual identities also varies between platforms, ranging from a persistent real-world identity on Facebook to the fleeting identities on platforms like Yik Yak and Craigslist [31, 58].

Further complicating matters, similar features are often designed quite differently on different platforms, so the ability to perceive and use a particular feature on one platform does not necessarily transfer to another; mastering the privacy tools on one platform, for example, does not necessarily prepare the user to use a completely different set of privacy tools on another platform [35]. As such, it is not enough to know whether users understand that a particular action "online" can be done or has particular consequences, but rather that people understand the actions and consequences on specific platforms.

In seeking to understand how people perceive these affordances across platforms, we asked:

RQ1: *How do user perceptions of self-presentation affordances relating to the self vary between platforms?*

Other Actors

The second challenge to conventional notions of self-presentation stems from the novel and powerful influence that *other actors* can now play in an individual's self-presentation. This includes expanded opportunities for one's contacts (e.g., Facebook "friends" etc.) to provide feedback, and the capacity for other actors to add new elements to the online presentations of their connections via tagging and other mechanisms [36, 65].

Content posted by others may be seen as more objective or trustworthy than content generated by the self, and so may be weighed more heavily in impression formation [62, 63]. If this content is negative, it might pose a face threat, or unflattering portrait of an individual [36, 42]. Moreover, features that allow people to be aware of or restrict content generated by other actors linked to their identity operate differently across platforms. All of this stands to complicate people's understanding of and ability to manage others' role in their own self-presentation. We asked:

RQ2: *How do user perceptions of self-presentation affordances relating to other actors vary between platforms?*

The Audience

The third challenge to conventional notions of self-presentation concerns the *audience*. In Goffman's [21] model, differentiated self-presentation allows the portrayal of ideal selves to diverse audiences through the use of "region behavior," where different contexts have different presentation requirements, and the individual behaves accordingly. The key to this differentiated behavior is an understanding of who is in the current audience.

This information, however, is often obscured in interactions on social media platforms. Complex privacy schemes and proprietary algorithms may determine when and to whom content is delivered. This increases the possibility of context collapse [8, 41, 58] and makes it hard for users to understand which audiences they are "performing" their self for [18, 48], exacerbating the existing problem of

inaccurately imagined audiences, where the user's own idea of who will likely see content diverges from the actual pool of possible audience members [34].

It is increasingly important to be aware of the cues that different social media platforms provide about audience, and there is evidence that providing clear system-generated cues to users about their audience changes user behavior [18]. However, once again, there are substantial differences in the features provided by different platforms for managing audiences, from controls on who can see content to the transparency of one's audience. We therefore asked:

RQ3: *How do user perceptions of self-presentation affordances relating to the audience vary between platforms?*

An Additional Challenge: Individual Differences

In addition to the three challenges that social media bring to traditional self-presentation, there is evidence that individual differences in personality traits, skills and experience might further influence people's understanding of and perception of social media affordances for presentation of the self. Understanding how to effectively learn about and use the complex array of available tools and features to meet one's self-presentation goals often has been shown to involve developing skill (e.g., [26, 35]) through usage, preexisting generalized internet skill, and level of engagement with the platform [15]. We will refer to all three of these related concepts as "experience."

Personality factors such as the "big five" have also been shown to drive both platform usage and self-presentation behavior. This includes influencing presentation strategy via one's own posting behavior and one's reactions to other actors [1, 30, 51]. Higher-order personality constructs such as self-monitoring [36] and self-esteem [3, 55] also have effects. We therefore also asked:

RQ4: *How do prior experience on a platform and individual personality traits affect user perceptions of self-presentation affordances?*

AN AFFORDANCES-BASED FRAMEWORK

To answer our research questions, we iteratively developed a preliminary framework for understanding the affordances for self-presentation that transcend multiple popular social media platforms. Through in-depth, exploratory usage of 21 sample platforms, the lead author and two undergraduate research assistants examined and compared platform features related to self-presentation. Platforms were selected to capture a broad swath of available social media features¹. The authors iteratively discussed how these

features related to each other and to self-presentation behavior. We structured our framework (see Table 1 for affordances and features) according to the three key challenges that motivate our research questions.

The Self

Affordances related to the self center on the generation and persistence of content and identity, asking "what can I say about myself, and how permanent will it be?"

Presentation Flexibility

Presentation flexibility is the extent to which a platform affords the ability to present oneself using a variety of content formats and styles. Presentation flexibility is afforded by a platform's content generation features (e.g., photo uploading/editing, text boxes, structured profile fields). These features vary from platform to platform, and their extent and level of imposed structure can affect expression [7, 10], such that we would expect platforms with high perceived presentation flexibility to have a more diverse set of presentation choices and structures.

Content Persistence

Content persistence is the extent to which a platform affords the continued availability of content over time. Self-presentation online is potentially affected by the permanence or ephemerality of content, perceptions of which affect user behavior and expectations [4, 8]. When platforms afford content persistence, such as when conduct and utterances are searchable and available for later scrutiny, users may change their self-presentation strategies given the possible loss of control over their content [40, 57]. In contrast, if self-presentation content is perceived as ephemeral, users may produce content with the assumption that nobody will remember the specifics of the content [4].

Identity Persistence

Identity persistence is the extent to which a platform affords the identification of content with an individual persona over time. We define *persona* as the amalgamated online "face" of an individual. A persona may be one of many online personas a real-world individual maintains, or there may be a one-to-one relationship between real world individual and persona(s). Content on platforms that afford identity persistence can be linked with a known individual, either in the real world or as a stable online identity. Direct linking of online self-presentation to a real world identity changes self-presentation behavior by making it more or less restrictive [58], as does perceived level of anonymity [28, 68] and the potential for using temporary accounts [31].

¹ When developing the self-presentation affordances out of platform features, we took into account popular platforms like Facebook and Twitter, smaller sites with uniquely focused communities such as DeviantArt and Soundcloud, and edge cases with unique properties, such as YikYak and Swarm. The sample set also aimed to span different types of social media platforms by

purpose, including mainstream, multi-purpose platforms (Facebook, Twitter, Google+), platforms built around media sharing (Vine, Instagram, YouTube), community-specific platforms (DeviantArt, Tumblr, Pinterest, Quora, Swarm), dating platforms (Tinder, Grinder, OkCupid), professional platforms (LinkedIn), anonymous platforms (YikYak, Craigslist, Reddit), chat platforms (Snapchat), and publishing platforms (Kinja, SoundCloud).

	Affordance	Short Definition	Related Platform Features
Self	Presentation Flexibility	Ability to present oneself using a variety of content formats and styles.	Input structure (freeform/prompts/structured), input fields, input types (text/photo/video), connection suggestions
	Content Persistence	Continued availability of content over time.	Ephemerality (regularity of content erasure), editability (includes deletion)
	Identity Persistence	Identification of content with an individual persona over time.	In-person identity required, stability of username/handle, multiple identities allowed (technical & TOS)
Other Actors	Content Association	Ability to link content with one's persona.	Tagging mechanisms, tagging prompts, connection approvals, tie strength specification
	Feedback Directness	Ability to respond directly to content.	Feedback level available (none/binary/comments), feedback reward mechanisms
The Audience	Audience Transparency	Awareness of who is in the audience for persona-linked content.	Visibility mechanisms (chronological / complex) & default, primary / secondary / actual audience visibility, default tag audience, access methods (public/sign-in), reshare, search
	Visibility Control	Individual determination of what persona-linked content is visible to others.	Feedback/tag approval mechanisms & defaults, privacy setting granularity (sitewide/post specific), targeting mechanisms (personal/topic)

Table 1. Self-presentation affordances and related platform features. See appendix for scale items.

Other Actors

Affordances that relate to other actors center around the potential for positive and negative influence by others on one's own self presentation, including the possibility of face threats [36] via amplified, potentially warranted content [62, 63] and fundamentally ask "what can others publicly say about and in response to me?"

Content Association

Content association is the extent to which a platform affords the ability to link content with one's persona. This linking of content and people occurs via mechanisms like tagging [30], linking people to content like photos [63, 64] or physical location [24] publicly, and sometimes automatically [56]. The extent to which people perceive the possibility of these associations can motivate their initial self-presentation decisions as well as their strategies for dealing with face threats [30, 36].

Feedback Directness

Feedback directness is the extent to which a platform affords direct responses to content. Platforms that afford feedback, like replies and comments, make these responses visible to a larger audience. This could have a positive effect, supporting claims made by the self (e.g., skill endorsements on LinkedIn), but could also introduce negative information or invalidate self-made claims [54, 60]. Social media platforms can also actively encourage this type of feedback through incentive mechanisms like Yakarma on YikYak or reddit link karma [52].

The Audience

Affordances related to audience center around awareness of and control over *visibility mechanisms* which, drawing on Diakopolous [11], we define as computational processes that prioritize, classify, associate, promote, and display

content. They fundamentally ask "who can see my content, and what can I do to control that?"

Audience Transparency

Audience transparency is the extent to which a platform affords user awareness of who is actually in the audience for persona-linked content. Platforms can afford audience transparency through direct (e.g., lists or counts of viewers) or indirect (e.g., feedback from active audience members) cues. Platforms that afford audience transparency allow for a better imagining of an audience, with a direct effect on self-presentation choices [5, 61].

The classical notion of self-presentation as an interactive process with discrete audiences [21] is challenged by context collapse, where many formerly segmented audiences are combined into one large audience, such that content intended for one audience may be visible to unintended audiences [8, 41]. Thus, context is reduced or disappears, optimizing self-presentation situationally becomes difficult, if not impossible [27, 58], and expectations for content privacy become unclear [45]. This problem is exacerbated by the introduction of opaque visibility mechanisms, which move from simple-to-understand chronological systems to complex mechanisms that use multiple factors, both public and private, to personalize content (e.g., the Facebook News Feed), sometimes with very little user understanding [18]. This makes it even more difficult for users to perceive their actual, primary/active (e.g., the individuals on your list of followers), and secondary (e.g., your followers' followers, who might see your content via your followers) audiences.

Visibility Control

Visibility control is the extent to which a platform affords individual determination of what content linked to their persona is visible to others. Platforms that afford visibility control give users more flexibility in specifying who can

see what, when, which can affect decisions around self-presentation content [5, 61]. While most platforms provide ways to target content towards individuals or groups via targeting tools or privacy settings, these are often confusing or inadequate [9, 35, 37, 53]. Additionally, platforms may provide some controls over the visibility of other-generated content and content associations [40, 66].

THE PRESENT STUDY

Affordances are, of course, not based on features alone; as relational constructs, they must take user perceptions into account [20, 46]. As such, for our affordance framework to have utility, it must account for user perceptions. Understanding user perceptions of these affordances also allows us to examine how perceptions of self-presentation affordances relate to platform differences and individual differences between users.

Accordingly, we developed and deployed an online survey to examine user perceptions of the features comprising each affordance. To capture a wide range of users in this initial exploration, we asked participants about their perceptions of one out of six major social media platforms with wide adoption and varied user bases [12, 13]: LinkedIn, Facebook, Twitter, Instagram, Tumblr, and Snapchat.

METHOD

Participants

Participants were recruited through flyers posted in a large Midwestern city near the lead author's university, including on two mid-sized university campuses, as well as Craigslist advertisements targeted to 20 major US cities, and Facebook advertisements targeting all US adults. A total of 277 people completed at least part of the survey, with 84 eliminated due to duplicate IP addresses or answering less than 50% of items, resulting in $N=193$. Participants ranged in age from 19 to 75 ($M=30.3$, $SD=10.69$). Slightly over half the participants identified as female (58%), with 40% identifying as male and 2% identifying outside the gender binary. 51% of participants reported working full time, and 19% report being undergraduate students; others were part-time workers, graduate students, unemployed individuals, and retirees. 65% of participants identified as white/Caucasian, while 12% identified as black/African American and 9% identified as Asian; others identified as Hispanic, Native American, and mixed race.

Procedure

Individuals wishing to participate emailed the address on the advertisement, and were emailed back instructions for an anonymous Qualtrics online survey. Upon opening the survey, they were presented with screening questions asking if they were over 18 years old and regular users of at least two social media platforms (defined as at least once a week per platform). Qualifying participants were asked to select the two of the six platforms that they use the most frequently; one of those two was then randomly selected as the focus for their survey. Participants were then asked about their usage and skill specific to that platform.

The remainder of the survey was divided into sections that reflect everyday user experience on the platform, e.g., a section on posting content, a section on tagging, etc. In each section, participants were asked via an open-response item to recall and describe a specific action or episode from their experience on the platform. For example, before a group of questions concerning who might have seen a past post and how a past post could be altered, we asked the participant to tell us about the last thing they posted to the platform, how they went through the process of posting it, and what choices they had to make along the way. They were then asked to indicate their confidence in a series of statements that related to that action.

Finally, participants filled out personality inventories along with demographic items. After completion, participants received a \$5 gift card to their choice of Amazon or Starbucks as compensation.

Measures

We developed scale items reflecting features related to the affordances described above (see Appendix). Each item corresponded to something the participant was likely to see as a discrete platform feature. For example, to capture perceptions of editability, a feature related to content persistence, we used the statements "If I want to, I can go back and change this (Platform) post" and "If I want to, I can go back and delete this (Platform) post."

We presented each item as a statement that a particular action was possible on the platform in question, and asked the participant to rate how confident they are that the statement is true based on their past experience on a 1-4 scale anchored by "not at all confident" and "very confident". Every item included the name of the specific platform to ensure that participants were answering the items based on their experiences with that platform. We maintained this user-centric approach for items meant to assess potential actions of others based on the principles of egocentric anchoring in knowledge imputation, where individuals base their assumptions about the knowledge or skills of others on their own [17, 44].

Items were developed in an iterative process involving the authors and two research assistants, and pilot tested on a group of graduate students. Items corresponding to each affordance were averaged to find each affordance's overall perception rating. Our scales proved acceptably reliable

Affordance	ω_r	Mean	SD
Presentation Flexibility	0.75	2.32	0.59
Content Persistence	0.86	2.19	0.61
Identity Persistence	0.73	2.57	0.46
Content Association	0.74	2.75	0.51
Feedback Directness	0.80	2.93	0.56
Audience Transparency	0.84	2.56	0.40
Visibility Control	0.82	2.84	0.57

Table 2. Reliability and distribution for affordance scales.

across platforms (see Table 2). We use omega total (ω_t), a factor analysis based measure of factor saturation, as the measure of reliability for our affordance scales due to their explicitly multidimensional nature [49].

Personality and Experience Measures

To address our research questions about individual differences, we also included items to measure participant personality and experience.

For personality traits, we used the TIPI big five personality inventory [23], a short form with good test-retest reliability ($M=0.72$), measuring extraversion ($M=8.3$, $SD=2.9$), agreeableness ($M=10.1$, $SD=2.7$), conscientiousness ($M=10.6$, $SD=2.7$), stability/neuroticism ($M=9.6$, $SD=2.6$), and openness ($M=10.2$, $SD=2.2$). For self-monitoring ability we used Lennox and Wolfe's scale [32] ($\alpha=0.79$, $M=47.7$, $SD=5.41$), and for self-esteem we used Rosenberg's scale [50] ($\alpha=0.86$, $M=30.3$, $SD=5.4$). All three of these scales have previously been applied to social media research (e.g., [51], [36], and [55], respectively).

To capture prior online experience, we used Hargittai's web-use skills inventory [25] ($\alpha=0.87$, $M=47.7$, $SD=5.41$), which tests familiarity with internet-related concepts. To capture level of user investment in platforms, we used a generalized form of Ellison, Steinfield, and Lampe's Facebook intensity scale [15] ($\alpha=0.82$, $M=47.7$, $SD=5.41$).

Finally, to capture platform usage, we deployed our own measure, which asked participants to report the frequency with which they performed seven common platform activities (posting content, sending messages, reading content, receiving messages, editing content, deleting content, and commenting on content) on a six-point scale from "weekly or less" to "multiple times per hour." Our scale proved highly reliable ($\alpha=0.90$, $M=16.1$, $SD=7.7$).

Analysis

To answer our research questions, we ran seven ordinary least squares (OLS) regressions, one for each affordance. In each regression, we used the perceived rating of the affordance as the dependent variable; e.g., in the regression for presentation flexibility, user assessment of the degree of presentation flexibility afforded by a platform. We included platform as a categorical independent variable using deviation coding comparing each platform to the least-squares grand mean. We also included our experience and personality measures as continuous independent variables, along with age and gender. We tested all independent variables for multicollinearity; the resulting VIF values ranged from 1.23 to 2.76, indicating that multicollinearity is not a concern.

All data cleaning, item calculation, and reliability testing was performed in R, while the OLS regressions were performed using JMP. We interpreted our results based on common standards for individual perception and psychological measures, per [43].

RESULTS

In this section, we examine the regression results, grouped by the three key challenges to social media self-presentation, and contrast them with the technical features we found in our initial feature-level exploration of our test platforms. We then look at overall trends in individual-level drivers of affordance perception. Model details for the OLS regressions are in Table 3.

The Role of the Self

RQ1 asked about differences in people's perceptions of affordances related to the role of the self. Overall, our results suggest that users perceived variance on all three self-related affordances, but with differing relationships to the technical features of the platforms.

Presentation Flexibility

For the affordance of presentation flexibility, most platforms were similar to the least-squares grand mean of 2.96. LinkedIn stands out as rating significantly higher, while Tumblr stands out as rating lower. These two platforms illustrate a case where users appear to perceive platform differences at the extremes, as these platforms differ substantially in the types of self-presentation opportunities they provide, both via features and rhetoric: LinkedIn provides a space for a standardized, professional resume-type self-presentation [33], while Tumblr provides a creative, less restrained space for highly expressive presentations of the self via a variety of media [59].

Content Persistence

For the affordance of content persistence, we found only one significant variation in perception between platforms. Most platforms did not differ from the least-squares grand mean of 2.2, with only Twitter having significantly higher perceived content persistence. While Twitter's public, archival nature may explain its high rating, the lack of variance in the other platforms is surprising given the important feature-level differences across platforms for how long content persists. Snapchat, for example, has content that is ephemeral by default and this is a key feature of the platform [4], yet it does not differ significantly from platforms like LinkedIn and Twitter which require manual deletion.

Identity Persistence

For the affordance of identity persistence, we found significant variations from the least-squares grand mean of 2.62 for several platforms. Facebook and LinkedIn are perceived as affording significantly more identity persistence than the mean level, while Tumblr is perceived as affording less. This can be explained by the differing feature-level requirements for self-presentation on each platform. Facebook and LinkedIn both require singular, real-life identification, while Tumblr easily allows the creation of multiple blogs under multiple identities. As our measures are for confidence in user perceptions, this indicates good design on the part of platforms, as technical features appear to match with perceived affordances. Users,

	Self				Other Actors		The Audience		
	Presentation Flexibility	Content Persistence	Identity Persistence		Content Association	Feedback Directness	Audience Transparency	Visibility Control	
Intercept (LS Grand Mean)	2.96	2.20	2.62		2.67	2.79	2.56	2.74	
<i>Platforms</i>									
Facebook	0.00	-0.06	0.21 **		0.16 *	0.16	0.05	0.37 ***	
Instagram	-0.06	-0.03	-0.08		0.16	0.08	-0.01	0.04	
LinkedIn	-0.36 *	-0.12	0.25 **		-0.04	-0.16	-0.11	-0.11	
Snapchat	0.03	0.16	0.05		-0.60 ***	-0.30 *	0.35 ***	-0.19	
Tumblr	0.30 *	-0.20	-0.30 **		0.13	0.08	-0.24 **	-0.09	
Twitter	0.09	0.25 *	-0.13		0.19 *	0.15	-0.03	-0.03	
<i>Experience Factors</i>									
Internet Skill	0.14	-0.17	0.11		0.18	0.22	-0.07	0.16	
Platform Intensity	0.10	-0.29	0.01		-0.01	0.31 *	0.10	0.12	
Usage	-0.31 *	-0.12	-0.08		0.25 *	0.15	-0.02	0.17	
<i>Personality Factors</i>									
Extraversion	0.04	-0.03	-0.06		0.00	-0.09	-0.10	-0.11	
Agreeableness	0.20	0.14	0.12		0.00	-0.16	0.08	-0.09	
Conscientiousness	0.18	0.07	0.23 *		0.05	0.11	0.01	-0.07	
Stability	-0.15	0.14	0.02		-0.24 *	0.09	0.15	0.06	
Openness	-0.07	0.18	0.09		-0.12	-0.02	0.01	-0.12	
Self-Monitor	-0.01	0.01	0.20		0.22	0.19	0.27 *	0.50 *	
Self-Esteem	0.22	-0.26	-0.32 **		0.14	-0.19	-0.22 *	0.03	
Platforms only R ²	0.13	0.07	0.17		0.18	0.07	0.20	0.10	
Full model R ²	0.27 **	0.19 *	0.28 *		0.3 *	0.22 **	0.29	0.24 *	

Notes: * $p < .05$, ** $p < .01$, *** $p < .001$. β coefficients are standardized. N is consistent across models. Age and gender are also included in these models, but are not significant and are omitted for space.

Table 3. OLS regression models showing effects on confidence in perception of self-presentation affordances.

in general, appear to be able to perceive relative differences in identity persistence across platforms and how their persona relates to their content over time differentially on these sites.

The Role of Other Actors

RQ2 asked how people's perceptions of self-presentation affordances related to the role of other actors vary between platforms. Our findings indicate that, where other actors are concerned, platform perception largely varies according to the corresponding technical features.

Content Association

For the affordance of content association, we found significant variation from the least-squares grand mean of 2.67 in three cases. Users perceived Facebook and Twitter as affording more content association while Snapchat afforded less. This coincides with the features of each platform, as Facebook and Twitter are focused on building connections, while the primary use of Snapchat is one-to-one messaging, where content stands alone as discrete messages. These data suggest that users largely manage to perceive possibilities for content associations from other actors, knowledge they can potentially use to support their self-presentation goals.

Feedback Directness

For the affordance of feedback directness, we found that users do not perceive much variation between platforms in how others contribute feedback that can affect self-presentation. The one platform differing from the least-squares grand mean of 2.79 is Snapchat. This is consistent with Snapchat's feature set; in general, there is no way to reply to a snap directly and publicly, only ways to continue a conversation with the person who sent a piece of content, and therefore no opportunity for feedback.

Reviewing the technical features of these platforms, it is clear that there is not much variation on most platforms in terms of what is offered; liking, commenting, etc., are standard features in most cases. The one surprising case is LinkedIn, which has a perceived level of feedback directness close to the least-squares grand mean, despite the presence of highly salient warranting tools in the form of its "endorsements" feature. It is possible that users may be missing this fine-grained feature.

The Role of the Audience

RQ3 asked how people's perceptions of self-presentation affordances related to how the audience vary between platforms. Our findings point to surprising platform

variations on both audience affordances, especially in cases where prior work has indicated user confusion.

Audience Transparency

For the affordance of audience transparency, we found that Snapchat affords comparatively high levels of audience transparency, which is unsurprising considering its one-to-one messaging focus; presumably, most users know exactly who a snap is going to, and the platform has features which discourage further sharing of content by notifying the sender of an attempt to screenshot or copy the snap. In contrast, Tumblr affords comparatively low levels of audience transparency, which tracks with the generally public, searchable nature of the platform, as well as our finding of comparatively low perceived identity persistence above.

We did not find significant variations outside of these extremes. This is surprising considering the well-documented user confusion over audiences [6, 34]. This result is particularly surprising for Facebook, which has a previously-documented mismatch between actual user understanding of Facebook's visibility mechanisms and perceived understanding [18]; our finding suggests that Facebook users may actually have a lower perceived level of confidence in audiences than previously reported.

Visibility Control

For the affordance of visibility control, the pattern of results reflects the technical features of platforms. Facebook stands out as affording comparatively high levels of visibility control. An examination of technical features reveals that Facebook offers more visibility control features than most platforms; it provides myriad ways to select audiences and protect user privacy. However, prior work suggests that the tools provided by Facebook are often poorly understood and sparingly used [9, 35], making it surprising that participant confidence in Facebook's visibility controls is so comparatively high. This suggests that while users may have a hard time using Facebook's tools, they are at least aware that the tools exist.

Individual Differences

RQ4 asks how the individual factors of platform experience and personality differences affect user perceptions of platform affordances. We first compared the variance explained by a platforms-only model with that explained by a full model including individual factors. In nearly all cases (see Table 3, bottom), individual-level variables increased the R^2 values by a statistically significant margin. We then examined each model for effects of individual factors.

Self-Related Affordances

Perceptions of the self-related affordances are driven by a mixture of experience and personality factors. Perceptions of the presentation flexibility are positively affected by platform usage. Here, experience clearly matters in knowing how flexible the tools afforded for self-presentation actually are, suggesting that users will gain confidence in their perception of this affordance as they

become more experienced users. In direct contrast, perceptions of identity persistence are affected by personality factors. Specifically, they are positively related to the big-five personality trait of conscientiousness, while self-esteem has a significant negative effect. This suggests that high conscientiousness and low self-esteem individuals have a better grasp on the variety of tools that are available for differentiating their self-presentation. Participant confidence in perceptions of content persistence is not affected by any of the experience or personality variables.

Other-Actor-Related Affordances

Perceptions of other-actor affordances are also affected by a mix of experience and personality factors. Perceptions of content association, in particular, are affected by both types of factors: platform usage has a positive effect, and the big five stability characteristic also has a negative effect, such that those individuals with neurotic personality attributes at the low end of the stability spectrum are more confident in their perception of content association. This suggests that experienced and neurotic users are more aware of the potential for content linkages from other actors that content association affords. Perceptions of feedback directness, meanwhile, are only affected by platform intensity, suggesting that those who are more invested in a platform and identify with that platform are more likely to invest in fully exploring how they can participate in the community.

Audience-Related Affordances

Perceptions of the audience-related affordances are unique here in that they are exclusively affected by personality factors; usage and experience factors appear to have no effect. This suggests certain personality types may tend to be more aware of their audience. Perceptions of audience transparency are positively affected by self-monitoring ability and negatively affected by self-esteem, such that high self-monitors and individuals with low self-esteem appear more cognizant of how transparent their audience is.

Perceptions of visibility control are also linked to self-monitoring ability, such that those with high self-monitoring ability are more confident in their perceptions of the visibility control affordance. Taken together, these results suggest that high-level personality characteristics are a key factor in understanding user perceptions of these increasingly important audience-related affordances.

DISCUSSION

We have presented a novel set of affordances relating to self-presentation that is rooted in key challenges that social media present to traditional theories of self-presentation. This allows us to look across platforms while accounting for user perceptions [16, 19]. In this section, we present three ways this framework can be used to illuminate and explore self-presentation issues: systematically differentiating platforms, identifying root causes behind the perception of self-presentation affordances (and potential resulting behavior), and enabling affordance-based design to support self-presentation.

The Platforms As Perceived By Users

Our findings suggest wide variance between platforms on perceptions of self-presentation affordances. However, as Kraut has recently pointed out [29], in many fields research on social media tends to focus on single platforms [16] and attempts to generalize or otherwise treat social media as monolithic [19]. Our results suggest that people's perceptions of self-presentation possibilities, and consequently self-presentation behaviors themselves, must be examined with variance across platforms in mind. As a research community, our design of studies and interpretation of results should account for different affordances provided by different platforms, and further consider the implications of these differences for expected behavior. We should be cautious in interpreting results from studies of one platform that attempt to generalize to "social media" broadly. Clearly, on self-presentation factors at least, this practice may not yield practically useful results, and the CSCW community is well-positioned to play a key role in advocating platform-sensitive research design.

By allowing for dialog that transcends platform boundaries while still accounting for differences between platforms, our framework provides a starting point for systematic consideration of how these affordances affect self-presentation behavior, and how to adapt existing theories to reflect these novel behaviors. Our survey results begin to offer a picture of perceived self-presentation affordances on several popular platforms.

Tumblr, for instance, is perceived to afford high presentation flexibility, low identity persistence, and low audience transparency; this turns it into a space where identity can be temporary if needed, freeing self-imposed restrictions on content in the manner suggested by Leavitt [31]. In practice, one potential outcome of this is a space for low-risk self-presentation where individuals can try identities out and expose their ideas to a wide, unpredictable swath of other users whose identities are also often temporary and not clearly tied to a real-world persona.

LinkedIn, in contrast, is perceived as more regimented in affording higher identity persistence and lower presentation flexibility. Its content is recognized as persistent and likely to be seen by unexpected parties in that it affords only moderate audience transparency and visibility control. The careful consideration of what to share that this imposes on users could lead to a "lowest common denominator" approach to disclosure, as suggested by Hogan [27].

Facebook, meanwhile, affords high levels of identity persistence and content association to make lasting impressions, but also affords high visibility control to specify exactly who is able to see content. This balance in affordances may contribute to the popularity of Facebook as a platform of choice for self-presentation [13]. At the same time, the relatively low levels of perceived audience transparency on such a popular platform might contribute to

the confusion over visibility mechanisms that studies have repeatedly shown (e.g., [6, 18, 34]).

Snapchat stands out as a space for precise presentation, with low content association and feedback directness affordances limiting the possibility of face threats from other actors, and the highest perceived level audience transparency that we saw in our results, suggesting relatively high awareness of audience. Recent work has also noted Snapchat for its reduced need for self-consciousness due to ephemerality [67], though we did not find a significant difference in Snapchat's affordance of content persistence. With regard to the surprising content persistence finding, one possible explanation is the prevalence of attempts to educate users that content posted online "lasts forever." This may suggest that attempts to educate around self-presentation online, without taking individual platform differences into account, have led to misunderstandings about affordances of content persistence.

Finally, Twitter stands out as a semi-public archival medium, with high perceived content persistence and content association affordances, leading to a broadcast environment with public visibility, but also a concern of context collapse, as suggested by Marwick and boyd [41], and very little opportunity for audience differentiation [21].

Individual Differences: Drivers of Perception

In addition to telling us about affordance perception across platforms, our framework opens the door to investigating individual-level factors that may drive differences in perception of self-presentation affordances. A body of prior work has indicated that individual experience and personality factors can impact effective use of social media tools (e.g., [1, 26, 34, 35, 55]). Our findings suggest that this carries over to perceptions of self-presentation affordances, as we found that perceptions of all but one of our affordances are at least partially driven by individual differences. As such, future self-presentation research should account for personality and experience factors in its design. In particular, there is a need for work that tests the causal relationship between individual factors, perceptions, and observed self-presentation behavior.

It is also essential for future work to recognize the differences in which individual phenomena drive perceptions of different affordances, and how those differences might relate to existing theory. Our results around RQ4 illustrate an interesting divide in what drives perceptions: affordances where confidence in perception is driven by experience factors, and affordances where confidence in perception is driven by personality factors. The existence of this divide suggests that some self-presentation studies would be best served by integrating intensive experience and skills-based components, while others would be best served by integrating more psychometric assessment.

Confidence in perceptions of presentation flexibility and feedback directness are both primarily driven by experience factors; this suggests that more regular users, whether they play the role of the originating self or another actor through feedback, are more attuned to the ways in which platforms guide their input, as they have likely used the input tools more overall.

In direct contrast, confidence in perceptions of identity persistence, audience transparency, and visibility control are driven by personality factors, including the big five personality traits as well as self-monitoring ability and self-esteem. This means that when it comes to self-presentation challenges around audiences, personality may be a key factor to examine, as perception of both of our audience-related affordances is driven exclusively by personality factors. This suggests a need for further work that investigates the relationship between personality factors and audience-related affordances, especially in relation to desired audiences and presentation goals, as well as observed presentation behavior. Cross-platform within-subjects work is also necessary to establish relative perceptions by the same individual across platforms, as well as potential personality-related biases in choosing platforms on which to present oneself.

Our findings also suggest that we should reconsider the relationship between online and offline social skills when it comes to perceptions of self-presentation affordances. For example, the perception of affordances for audience-related self-presentation may not be particularly natural for individuals with traits we normally consider as “socially skilled,” such as stability, high self-monitoring, and high self-esteem. Our findings suggest these individuals overestimate audience transparency and visibility control, and might also underestimate content association, potentially leading to potential context-collapse as content may inadvertently become visible to unintended audiences.

In direct contrast, our results suggest low self-esteem users, who, instead of using social media as a casual diversion, use it as a strategic social capital tool [3, 55], may examine audiences more closely and take the permanence of their identity more seriously, leading to better perception of related self-presentation affordances. Similarly, individuals with neurotic personalities may perceive content association more readily, as they have a preference for public behavior [1] and are possibly more attuned to the ways in which they (and others) can associate content with individuals. This is not to say no offline skills translate; our findings indicate that the cautious vigilance and precision associated with high conscientiousness [22] appear to lead users to be more aware of the potential persistence of their identity online, and the high self-monitoring individual, able to operate as a social chameleon [32], may have an advantage in perceiving visibility control.

Implications for Design

In addition to the implications for theory and future study design, our framework provides designers with a toolkit for thinking about self-presentation behaviors on their platforms in concert with design or functionality goals. Self-presentation is an implicit function of any social media platform, and considering it through the lens of perceived affordances allows designers the ability to support both users and platform objectives, as perception is crucial to affordance.

Designers may want to use this framework to ask questions about key self-presentation affordances in areas where our results indicate that there is a mismatch between affordance perception and technical features. Content persistence and audience transparency stick out as two areas with significant user confusion and, therefore, unrealized affordances. For platforms that desire to support processes like differentiated self-presentation and help users combat context collapse, which could help address key user concerns around privacy and data protection, these could be focus areas. In turn, by asking questions about why these affordances confuse users, designers can help us gain a better understanding of these affordances and the behavior around them.

Limitations and Future Work

As with any study of this nature, there are limitations that urge caution in interpreting our findings. First, many of our measures are self-reports about perception, and are therefore subject to biases common to these methods. However, such measures have clear utility and are frequently used by researchers (e.g., [31, 36]). Future research should attempt to address these potential biases via experimental and other types of work.

Another limitation of this work is the scope of platforms studied. Though we believe that an examination of widely-used platforms was essential as a first step, future work should study a wider range, including niche platforms that may have unique attributes. Relatedly, future work should take into account how affordance perception might be influenced by differential composition of audiences. Our treatment of audience focuses on perceived ability to know and limit one’s audience, but an alternative approach would focus on deliberate user construction and/or targeting of audiences (e.g., [39]) and effects on perceived presentation flexibility and content persistence.

Additionally, our framework is limited by the fact that it is built from our analysis of platform features as they exist now. These platform features will inevitably shift over time, and while we believe our affordances are high-level enough to weather these changes, they should be checked periodically, and certainly rebuilt when the space of self-presentation undergoes the next inevitable upheaval on the order of introducing social media.

In addition to the work suggested above, future work should also explore the emerging influence of system-generated cues. Prior work has shown that awareness of system-level algorithmic intervention on visibility, in particular, changes user perceptions [18]. Additionally, the emergence of algorithms as additional “other actors” has been shown to impact the self-presentation process, whether in the form of simple indicators like friend and like/favorite counters [2] or more complex constructs such as Klout scores [14].

Finally, there is a need for additional qualitative and experimental work that dives deeper into user perspectives and seeks linkages between these proposed affordances and key impression management behaviors. We believe the affordance-based self-presentation taxonomy we have presented here provides a solid foundation for these studies, as well as other cross-platform work examining self-presentation and user perceptions. We offer the taxonomy as a generative step forward, and hope other researchers will find it useful, and build upon it in future work.

ACKNOWLEDGEMENTS

We acknowledge research assistance from Amol Mody and Minkyong Kim, as well as invaluable insights from Darren Gergle, the anonymous reviewers, and the associate chair.

REFERENCES

1. Yair Amichai-Hamburger and Gideon Vinitzky. 2010. Social network use and personality. *Computers in Human Behavior*, 26, 6: 1289-1295.
2. Marjolijn L. Anthéunis and Alexander P. Schouten. 2011. The Effects of Other-Generated and System-Generated Cues on Adolescents' Perceived Attractiveness on Social Network Sites. *Journal of Computer-Mediated Communication*, 16, 3: 391-406.
3. Valerie Barker. 2009. Older adolescents' motivations for social network site use: The influence of gender, group identity, and collective self-esteem. *CyberPsychology & Behavior*, 12, 2: 209-213.
4. Joseph B. Bayer, Nicole B. Ellison, Sarita Y. Schoenebeck, and Emily B. Falk. 2015. Sharing the small moments: ephemeral social interaction on Snapchat. *Information, Communication & Society*, 19, 7: 1-22.
5. Natalya N. Bazarova and Yoon Hyung Choi. 2014. Self-Disclosure in Social Media: Extending the Functional Approach to Disclosure Motivations and Characteristics on Social Network Sites. *Journal of Communication*, 64, 4: 635-657.
6. Michael S. Bernstein, Eytan Bakshy, Moira Burke, and Brian Karrer. 2013. Quantifying the invisible audience in social networks. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 21-30.
7. Jeremy Birnholtz, Colin Fitzpatrick, Mark Handel, and Jed R. Brubaker. 2014. Identity, identification and identifiability: the language of self-presentation on a location-based mobile dating app. In *Proceedings of the Proceedings of the 16th International Conference on Human-Computer Interaction with Mobile Devices & Services*, 3-12.
8. danah boyd. 2010. Social network sites as networked publics: Affordances, dynamics, and implications. In *Networked Self: Identity, community, and culture on social network sites*, Zizi Papacharissi (ed.). Routledge, New York, NY, 39-58.
9. danah boyd and Eszter Hargittai. 2010. Facebook privacy settings: Who cares? *First Monday*, 15, 8.
10. Herbert H. Clark and Susan E. Brennan. 1991. Grounding in communication. In *Perspectives on socially shared cognition*, B. Rogoff (ed.). 127-149.
11. Nicholas Diakopoulos. 2015. Algorithmic accountability: Journalistic investigation of computational power structures. *Digital Journalism*, 3, 3: 398-415.
12. Maeve Duggan. 2015. *Mobile Messaging and Social Media 2015*. Pew Research Center, Washington, DC.
13. Maeve Duggan, Nicole B. Ellison, Cliff Lampe, Amanda Lenhart, and Mary Madden. 2015. *Social Media Update 2014*. Pew Research Center, Washington, DC.
14. Chad Edwards, Patric R. Spence, Christina J. Gentile, America Edwards, and Autumn Edwards. 2013. How much Klout do you have... A test of system generated cues on source credibility. *Computers in Human Behavior*, 29, 5: A12-A16.
15. Nicole B. Ellison, Charles Steinfield, and Cliff Lampe. 2007. The benefits of Facebook “friends”: Social capital and college students’ use of online social network sites. *Journal of Computer-Mediated Communication*, 12, 4: 1143-1168.
16. Nicole B. Ellison and Jessica Vitak. 2015. Social network site affordances and their relationship to social capital processes. In *The Handbook of the Psychology of Communication Technology*, S. Shyam Sundar (ed.). John Wiley & Sons, Chichester, UK, 205-227.
17. Nicholas Epley, Boaz Keysar, Leaf Van Boven, and Thomas Gilovich. 2004. Perspective taking as egocentric anchoring and adjustment. *Journal of Personality and Social Psychology*, 87, 3: 327.
18. Motahhare Eslami, Aimee Rickman, Kristen Vaccaro, Amirhossein Aleyasen, Andy Vuong, Karrie Karahalios, Kevin Hamilton, and Christian Sandvig. 2015. “I always assumed that I wasn’t really that close to [her]”: Reasoning about invisible algorithms in the news feed. In *Proceedings of the 33rd Annual SIGCHI Conference on Human Factors in Computing Systems*, 153-162.

19. Samer Faraj and Bijan Azad. 2012. The materiality of technology: An affordance perspective. In *Materiality and Organizing: Social interaction in a technological world*, Paul M Leonardi, Bonnie A. Nardi and Jannis Kallinikos (ed.). Oxford University Press, Oxford, 237-258.
20. William W. Gaver. 1991. Technology affordances. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 79-84.
21. Erving Goffman. 1959. *The presentation of self in everyday life*. Anchor, New York.
22. Lewis R. Goldberg. 1990. An alternative description of personality: the big-five factor structure. *Journal of Personality and Social Psychology*, 59, 6: 1216-1229.
23. Samuel D. Gosling, Peter J. Rentfrow, and William B. Swann. 2003. A very brief measure of the Big-Five personality domains. *Journal of Research in personality*, 37, 6: 504-528.
24. Shion Guha and Jeremy Birnholtz. 2013. Can you see me now? Location, visibility and the management of impressions on Foursquare. In *Proceedings of the 15th International Conference on Human-Computer Interaction with Mobile Devices and Services*, 183-192.
25. Eszter Hargittai and Yuli Patrick Hsieh. 2012. Succinct survey measures of web-use skills. *Social Science Computer Review*, 30, 1: 95-107.
26. Eszter Hargittai and Eden Litt. 2013. New strategies for employment? internet skills and online privacy practices during people's job search. *IEEE Security & Privacy*, 3: 38-45.
27. Bernie Hogan. 2010. The presentation of self in the age of social media: Distinguishing performances and exhibitions online. *Bulletin of Science, Technology & Society*, 30, 6: 377-386.
28. Adam N. Joinson. 2001. Self-disclosure in computer-mediated communication: The role of self-awareness and visual anonymity. *European Journal of Social Psychology*, 31, 2: 177-192.
29. Robert E. Kraut. 2016. CHI 2016 SIGCHI Lifetime Research Award: Robert E Kraut. Video. (11 May, 2016). Retrieved May 27, 2016 from <https://www.youtube.com/watch?v=fCP5drJCuac>
30. Caroline Lang and Hannah Barton. 2015. Just untag it: Exploring the management of undesirable Facebook photos. *Computers in Human Behavior*, 43, . 147-155.
31. Alex Leavitt. 2015. This is a Throwaway Account: Temporary Technical Identities and Perceptions of Anonymity in a Massive Online Community. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing*, 317-327.
32. Richard D. Lennox and Raymond N. Wolfe. 1984. Revision of the self-monitoring scale. *Journal of Personality and Social Psychology*, 46, 6: 1349-1364.
33. LinkedIn. 2016. About us. Retrieved May 6, 2016 from <https://www.linkedin.com/about-us>
34. Eden Litt. 2012. Knock, knock. Who's there? The imagined audience. *Journal of Broadcasting & Electronic Media*, 56, 3: 330-345.
35. Eden Litt. 2013. Understanding social network site users' privacy tool use. *Computers in Human Behavior*, 29, 4: 1649-1656.
36. Eden Litt, Erin Spottswood, Jeremy Birnholtz, Jeff T. Hancock, Madeline E. Smith, and Lindsay Reynolds. 2014. Awkward encounters of an other kind: collective self-presentation and face threat on facebook. In *Proceedings of the 17th ACM Conference on Computer Supported Cooperative Work & Social Computing*, 449-460.
37. Yabing Liu, Krishna P. Gummadi, Balachander Krishnamurthy, and Alan Mislove. 2011. Analyzing facebook privacy settings: user expectations vs. reality. In *Proceedings of the 2011 ACM SIGCOMM Conference on Internet Measurement*, 61-70.
38. Ann Majchrzak, Samer Faraj, Gerald C. Kane, and Bijan Azad. 2013. The contradictory influence of social media affordances on online communal knowledge sharing. *Journal of Computer-Mediated Communication*, 19, 1: 38-55.
39. Ben Marder, Adam Joinson, Avi Shankar, and Kate Thirlaway. 2016. Strength matters: Self-presentation to the strongest audience rather than lowest common denominator when faced with multiple audiences in social network sites. *Computers in Human Behavior*, 6156-62.
40. Catherine C. Marshall and Frank M. Shipman. 2015. Exploring the Ownership and Persistent Value of Facebook Content. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing*, 712-723.
41. Alice E. Marwick and danah boyd. 2011. I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New Media & Society*, 13, 1: 114-133.
42. Andrew L. Mendelson and Zizi Papacharissi. 2010. Look at us: Collective narcissism in college student Facebook photo galleries. In *The Networked Self: Identity, community and culture on social network sites*, Zizi Papacharissi (ed.). Routledge, New York, NY, 251-273.
43. Gregory J Meyer, Stephen E Finn, Lorraine D Eyde, Gary G Kay, Kevin L Moreland, Robert R Dies, Elena J Eisman, Tom W Kubiszyn, and Geoffrey M Reed. 2001. Psychological testing and psychological

- assessment: A review of evidence and issues. *American Psychologist*, 56, 2: 128.
44. Raymond S Nickerson. 1999. How we know—and sometimes misjudge—what others know: Imputing one's own knowledge to others. *Psychological Bulletin*, 125, 6: 737.
45. Helen Nissenbaum. 2009. *Privacy in context: Technology, policy, and the integrity of social life*. Stanford University Press, Palo Alto, CA.
46. Donald A. Norman. 2013. *The design of everyday things: Revised and expanded edition*. Basic Books, New York, NY.
47. Andrew Perrin. 2015. *Social Media Usage: 2005-2015*. Pew Research Center, Washington, DC.
48. Emilee Rader and Rebecca Gray. 2015. Understanding User Beliefs About Algorithmic Curation in the Facebook News Feed. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*, 173-182.
49. William Revelle and Richard E. Zinbarg. 2009. Coefficients alpha, beta, omega, and the glb: Comments on Sijtsma. *Psychometrika*, 74, 1: 145-154.
50. Morris Rosenberg. 1965. *Society and the adolescent self-image*. Princeton University Press, Princeton, NJ.
51. Tracii Ryan and Sophia Xenos. 2011. Who uses Facebook? An investigation into the relationship between the Big Five, shyness, narcissism, loneliness, and Facebook usage. *Computers in Human Behavior*, 27, 5: 1658-1664.
52. Vivek K. Singh, Ramesh Jain, and Mohan S. Kankanhalli. 2009. Motivating contributors in social media networks. In *Proceedings of the First SIGMM Workshop on Social Media*, 11-18.
53. Manya Sleeper, Rebecca Balebako, Sauvik Das, Amber Lynn McConahy, Jason Wiese, and Lorrie Faith Cranor. 2013. The post that wasn't: exploring self-censorship on Facebook. In *Proceedings of the 2013 Conference on Computer Supported Cooperative Work*, 793-802.
54. Helen Spencer-Oatey. 2007. Theories of identity and the analysis of face. *Journal of Pragmatics*, 39, 4: 639-656.
55. Charles Steinfield, Nicole B. Ellison, and Cliff Lampe. 2008. Social capital, self-esteem, and use of online social network sites: A longitudinal analysis. *Journal of Applied Developmental Psychology*, 29, 6: 434-445.
56. Zak Stone, Todd Zickler, and Trevor Darrell. 2008. Autotagging facebook: Social network context improves photo annotation. In *Proceedings of the 2008 IEEE Computer Society Conference on Computer Vision and Pattern Recognition* 1-8.
57. Jeffrey W. Treem and Paul M. Leonardi. 2012. Social media use in organizations: Exploring the affordances of visibility, editability, persistence, and association. *Communication Yearbook*, 36, : 143-189.
58. Zeynep Tufekci. 2008. Can you see me now? Audience and disclosure regulation in online social network sites. *Bulletin of Science, Technology & Society*, 28, 1: 20-36.
59. Tumblr. 2016. About. Retrieved May 6, 2016 from <https://www.tumblr.com/about>
60. Sonja Utz. 2010. Show me your friends and I will tell you what type of person you are: How one's profile, number of friends, and type of friends influence impression formation on social network sites. *Journal of Computer-Mediated Communication*, 15, 2: 314-335.
61. Jessica Vitak. 2012. The impact of context collapse and privacy on social network site disclosures. *Journal of Broadcasting & Electronic Media*, 56, 4: 451-470.
62. Joseph B. Walther and Malcolm R. Parks. 2002. Cues filtered out, cues filtered in. In *Handbook of Interpersonal Communication*, Mark Knapp and John A. Daly (ed.). Sage, Thousand Oaks, CA, 529-563.
63. Joseph B. Walther, Brandon Van Der Heide, Sang-Yeon Kim, David Westerman, and Stephanie Tom Tong. 2008. The role of friends' appearance and behavior on evaluations of individuals on Facebook: Are we known by the company we keep? *Human Communication Research*, 34, 1: 28-49.
64. Yang Wang, Gregory Norcie, Saranga Komanduri, Alessandro Acquisti, Pedro Giovanni Leon, and Lorrie Faith Cranor. 2011. I regretted the minute I pressed share: A qualitative study of regrets on Facebook. In *Proceedings of the Seventh Symposium on Usable Privacy and Security*, 10.
65. Elizabeth Whittaker and Robin M. Kowalski. 2015. Cyberbullying via social media. *Journal of School Violence*, 14, 1: 11-29.
66. Donghee Yvette Wohn and Erin L. Spottswood. 2016. Reactions to other-generated face threats on Facebook and their relational consequences. *Computers in Human Behavior*, 57, April 2016: 187-194.
67. Bin Xu, Pamara Chang, Christopher L. Welker, Natalya N. Bazarova, and Dan Cosley. 2016. Automatic Archiving versus Default Deletion: What Snapchat Tells Us About Ephemerality in Design. In *Proceedings of the Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing*, 1662-1675.
68. Shanyang Zhao, Sherri Grasmuck, and Jason Martin. 2008. Identity construction on Facebook: Digital empowerment in anchored relationships. *Computers in Human Behavior*, 24, 5: 1816-1836.

APPENDIX

Affordance Scale Items

Participants were asked to rate their confidence in each statement on a 1 to 4 scale (not at all confident, mostly not confident, mostly confident, very confident). Items are presented here grouped by the affordance they measure. They were presented to the participants grouped by constructs native to the use of platforms, to make the survey more understandable and keep participants focused. Participant-side groups included sections based on:

- The main feed for a platform (newsfeed, timeline, etc.)
- Finding people/being found by others
- Posting to a platform
- Viewing, finding, and modifying posts
- User profiles
- Managing contacts, e.g., friends or followers
- Tagging and or labeling
- Giving feedback

Presentation Flexibility

- This (Platform) post can be any type of content (text, photos, video, audio, etc.).
- When I filled out my profile on (Platform), there were times when I couldn't add exactly what I wanted.
- When I filled out specific fields in my (Platform) profile, I had to choose from the answers that (Platform) gave me.

Content Persistence

- If I want to, I can go back and change this (Platform) post.
- If I want to, I can go back and delete this (Platform) post.
- Eventually, this post will disappear from (Platform).

Identity Persistence

- When I use (Platform), I have to use my real identity (either my real name, or what people call me face to face).
- I can have as many accounts on (Platform) as I want.
- I can change my username on (Platform).
- I can post this content to (Platform) without having my username attached or anyone knowing who I am (anonymously).
- I will be able to identify the person who posted this on (Platform) consistently in the future.

Content Association

- I can tag specific people in this post to (Platform).
- (Platform) will suggest possible people I might want to tag in this post.
- When I last added a contact on (Platform), both me and the other person had to approve before the connection was made.
- When I have a contact on (Platform), I can specify how or why I'm connected to that person, e.g., if they're a

family member, a friend, a co-worker, or just an acquaintance.

- (Platform) suggests people I might want to have as contacts.

Feedback Directness

- If they wanted to, other people were able to respond to this post on (Platform).
- I could easily express my interest in the post on (Platform) by clicking a response button (e.g., "like, favorite").
- I had the option to make a more detailed comment on the post in a text or image form, which might have included typing a response into a text box or uploading a GIF, etc.
- It was possible to use (Platform) to have a conversation with other people about the post if it interested me enough.
- If I respond to a post in some way, (Platform) will reward me in some way, such as increasing giving me points or increasing my public score.

Audience Transparency

- When I look at my main feed on (Platform), I see all the content my contacts have posted recently.
- I understand how (Platform) chooses what to show me in my main feed.
- I can change how (Platform) chooses what to show me in my main feed.
- I can find out exactly who saw this post on (Platform).
- There was a group of people on (Platform) who were likely to see this post in their main feed.
- I can find out who (Platform) was likely to show this post to.
- It is possible people were able to see this post without signing in to (Platform).
- People can find this post using (Platform)'s own search.
- People can find this post using an outside search engine, like Google or Bing.
- It's possible that people who read my post shared it with other people on (Platform).
- It's possible that people who read my post shared it outside of (Platform), on another platform or web site.
- Because I was tagged in this (Platform) post, that tag might show up in other people's main feeds.
- Since I was tagged in this (Platform) post, it will be easier for others to find it if they are looking for information about me.

Visibility Control

- I can manage my privacy settings on (Platform).
- I can specify who will or will not be able to see this individual post on (Platform).
- If I set specific preferences for who I want this post to be visible to, (Platform) will remember those preferences for the next time I post.

- I can make it so I have to approve any comments on this (Platform) post before other people see them.
- I am able to control who is allowed to see my profile on (Platform).
- When I saw this post on (Platform), I was able to remove the tag.
- (Platform) has a way to stop people from tagging me in the future without my permission.
- I can make this post easy for certain people to find on (Platform).

Usage Scale Items

Participants were asked to report their usage on a 1 to 6 scale. Response options, in ascending order, included

weekly or less, a few times a week, daily, a few times a day, hourly, and multiple times per hour.

- Post to (Platform)
- Send a message through (Platform)
- Read other people's posts or profiles on (Platform)
- Receive a message through (Platform)
- Edit something you've posted on (Platform)
- Delete something you've posted on (Platform)
- Comment on a (Platform) post