

Disclosure and Timeliness: Do users need a Later Button?



Abstract

Research has repeatedly shown that computer-mediated communications (CMC) lead to higher levels of disclosure of personal information (Tidwell and Walther 2002). Recent studies have examined the role of increasingly common social media and social network services (SNS) on disclosure in a variety of contexts (Mazer et al. 2007; Tufekci 2008). The combination of personal demographic data, taste preferences, public disclosure of friend networks and now increasing usage of tools for instantly updating status (e.g., Twitter, Facebook) has, we believe, fundamentally altered users' understanding of the *temporality* of information and its (*semi-*)permanence.

This study investigates users' willingness to disclose information with respect to how long ago that information may have been created or captured. Users were more willing to share items as time passed.

Potentially, a "Later Button" should be put into practice to address this latent willingness (40% of sharing scenarios) to disclose information at a later date.

Questions

Q1: What is the effect of time on willingness to disclose information?

H1: Users will be more willing to disclose information as time passes, across all variables.

Q2: What is the effect of information item type on willingness to disclose information?

H2: Users will be more willing to disclose information as time passes regardless of information item type.

Q3: What is the effect of intended audience on willingness to disclose information?

H3: Users will be more willing to disclose information to audiences closer to them (friends and family).

Q4: What is the effect of item intimacy level on willingness to disclose information?

H4: Users will be less willing to disclose information considered more intimate.

Methodology

Amazon's Mechanical Turk was employed to generate the set of results for this study. Sixty-three questions were asked and answered thirty-five times each. The questions were in the form: "How long ago must $\{q_item\}$ have been created/captured for you to be comfortable sharing it with $\{q_audience\}$?" The answer was an eight point scale consisting of: "A few seconds ago", "One hour ago", "One day ago", "One week ago", "One month ago", "One year ago", "Ten years ago", and "I would not share this with them". A total of 2030 results came from 278 "turkers" across age and gender lines for a total cost just under \$35.

There is currently no mechanism to construct a proper study design with mutually exclusive controlled groups – but with complete data reported by Mechanical Turk, it is possible to check for consistency among data provided by unique workers and to remove those that are not consistent with human behavior. The use of a simple mathematical CAPTCHA was also employed (as per Kittur, et al 2008). These helped to eliminate just 175 results from our original result set of 2205.

Results

Initial analysis of the results confirms the hypotheses regarding willingness to disclose.

Users share more with people they know, either friends and family or acquaintances, than with the public generally.

Users are more willing to share information as time passes, across information item type. There were, however, differences in the patterns of willingness to share across information item type.

While we divided audience into three categories for the study, there was no statistical significance between willingness to share with the "inner" and "outer" audiences ($X^2=1.845, p=.398$). Inner and outer were collapsed into "known" for this analysis.

A similar pattern emerged across intimacy level of information - users shared more information that was not intimate, and there was no significant difference between willingness to disclose "somewhat" and "very" intimate information ($X^2=.410, p=.815$). These two were collapsed into "intimate" for the analysis.

Conclusions

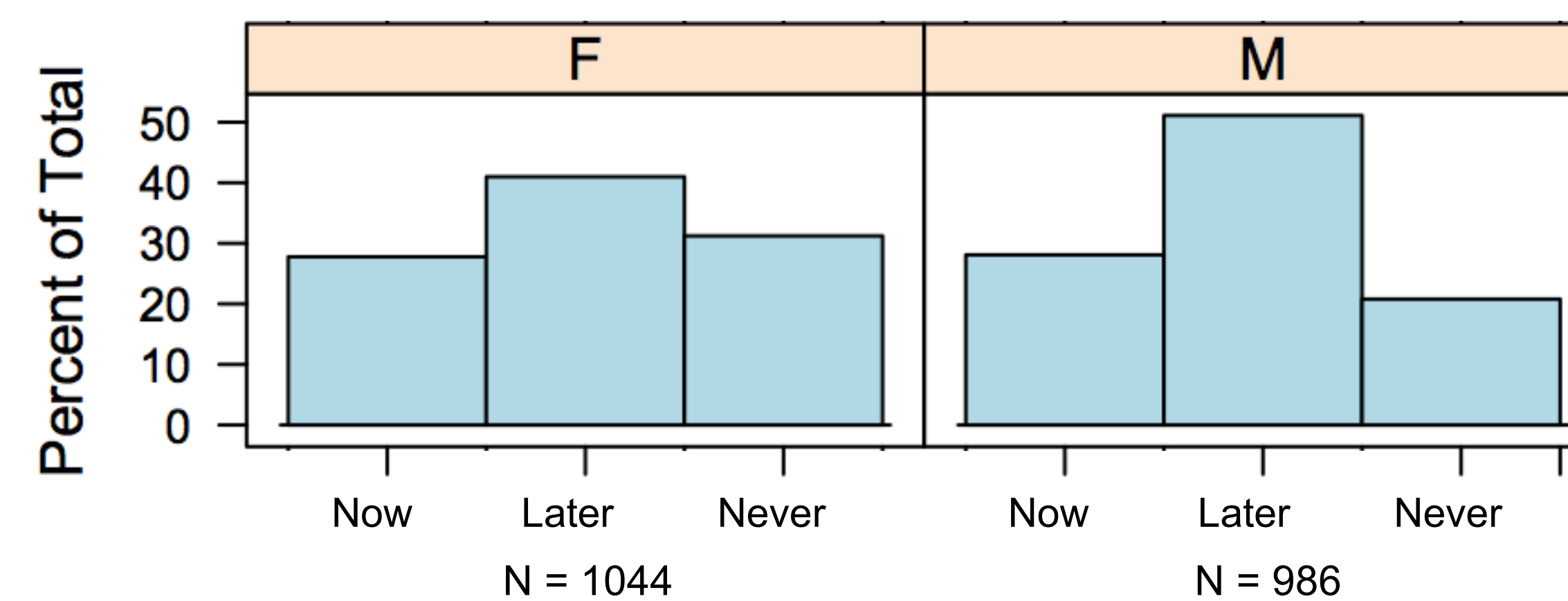
The most striking outcome of this research is the apparent willingness of over 40% of people to share these types of information with others "later", across demographics, the intimacy level of the item itself, and the perceived audience. This suggests a gaping disservice on the part of current tools.

Tools like Twitter and Facebook should consider an interface control that allows their users to designate the sharing of items "later". The more granular data from this study (dividing "later" into more discrete chunks of time) suggests a strong default for this control to be set at "one month" of elapsed time between the creation/capture of an information item and its availability to the designated audience.

The apparent collapse of nuance between "inner" and "outer" audience and between "very" and "somewhat" intimate items suggests a flattening of how we understand and relate to our information sharing and our perceived audiences.

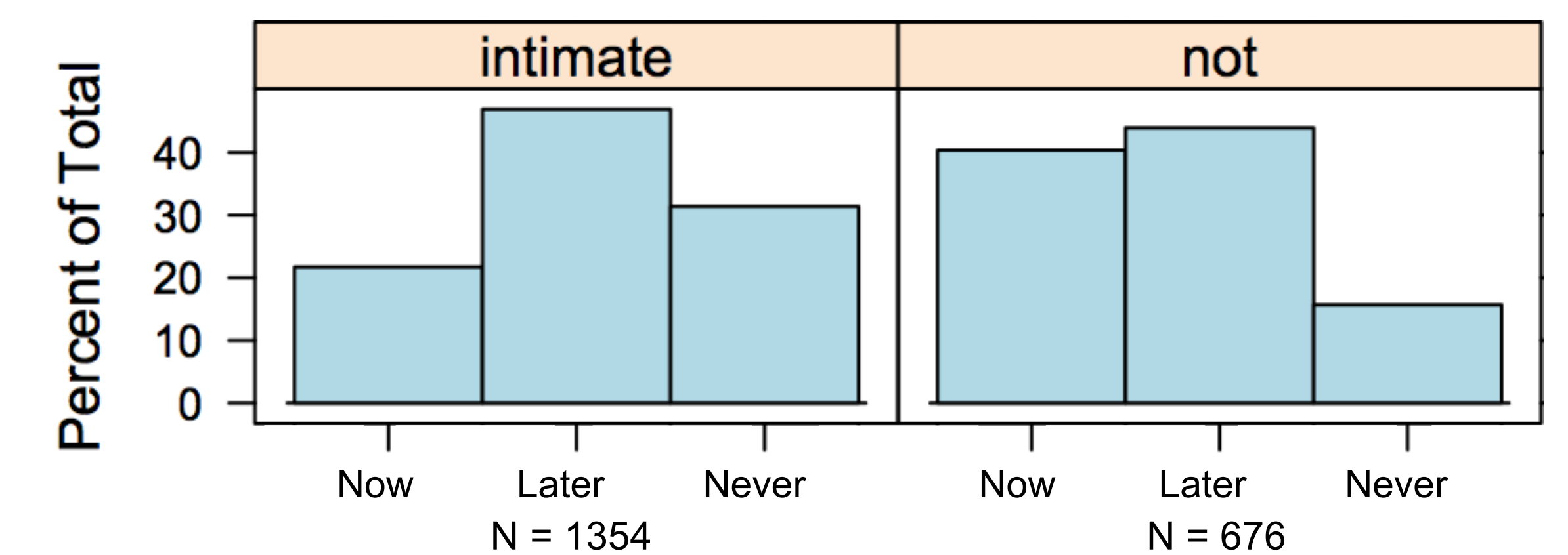
Are Facebook and/or Twitter to blame for this apparent flattening of our friendscape? Are all our friends equal when it comes to the mediated sharing of personal information?

Willingness to share by Gender



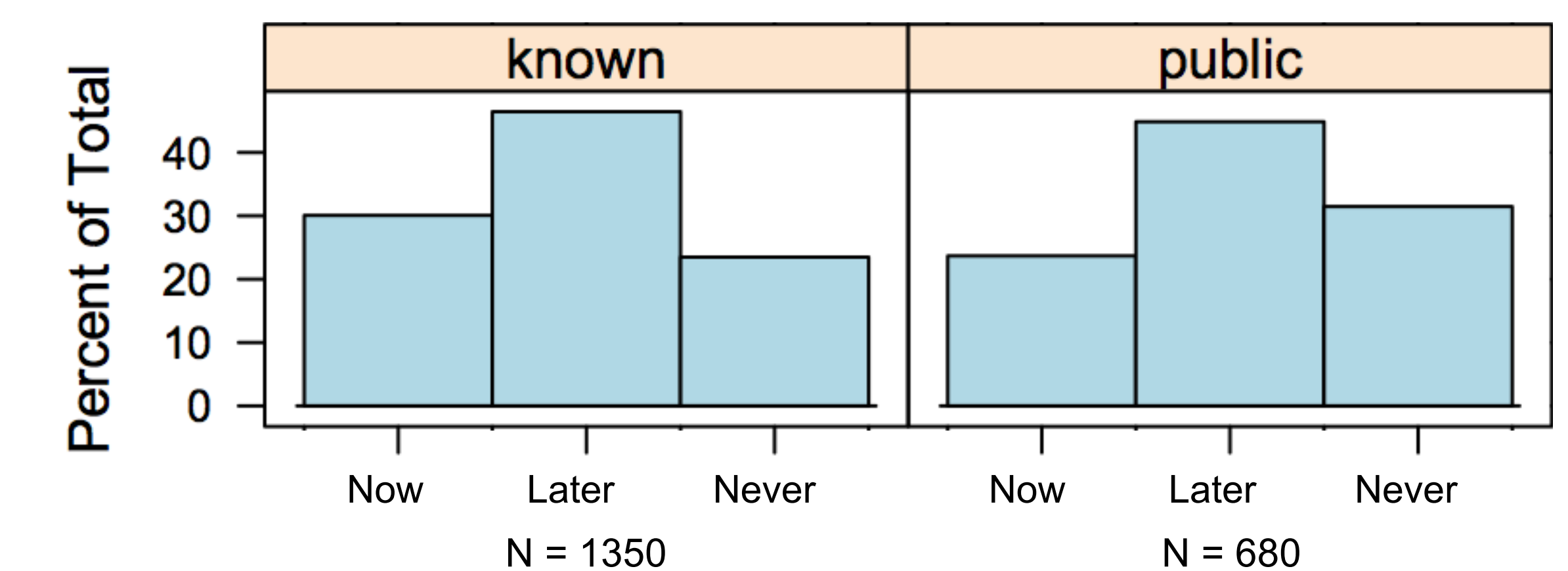
Men are more willing to disclose information overall. Men are also more willing to share older content after some time has passed. Women are more likely to have information they wish to keep to themselves forever. Over 40% of items would be shared with others after some time had passed, regardless of the gender of the person doing the sharing. $X^2=32.437, p=.000$

Willingness to share by Item Intimacy Level



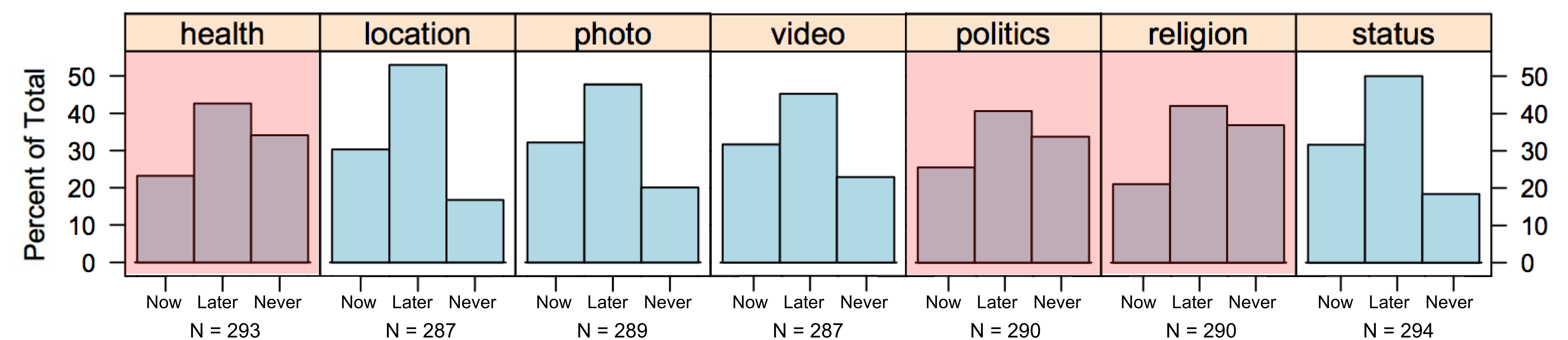
Items that are not intimate are much more likely to be shared in the immediate timeframe since their capture or occurrence. Intimate items are much more likely never to be shared at all. Over 40% of items would be shared with others after some time had passed, regardless of intimacy level. $X^2=99.670, p=.000$

Willingness to share by Perceived Audience



Willingness to share with those known to us is more common than sharing with the public at large. Willingness to share with anyone is more likely after some time has passed. Over 40% of items would be shared with others after some time had passed, regardless of perceived audience. $X^2=17.910, p=.000$

Willingness to share by Information Item Type



Willingness to share different information items does vary. Our willingness to share health, politics, and religious information is well below our willingness to share location, photos, video, and status updates. We are less willing to share those types of information immediately and more likely never to share that information at all. Over 40% of items would be shared with others, regardless of the type of information item.

Mazer, J., Murphy, R. and Simonds, C. J. (2007) The Effects of Teacher Self-Disclosure via Facebook on Perceptions of Teacher Credibility. NCA 93rd Annual Convention. November 2007, Chicago, IL.

Tidwell, L. C. Walther, J. B. (2002) Computer-Mediated Communication Effects on Disclosure, Impressions, and Interpersonal Evaluations Getting to Know One Another a Bit at a Time. Human Communication Research. 28(3), pp. 317-348.

Tufekci, Z. (2008) Can You See Me Now? Audience and Disclosure Regulation in Online Social Network Sites. Bulletin of Science, Technology & Society. 28(1), February 2008, pp. 20-36.