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## COMMENTARIES

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### Beyond Viral: Interpersonal Communication in the Internet Age

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The Internet has had a huge impact on human behavior. From meeting spouses and purchasing cars to interacting with friends and watching movies, the web has changed almost every facet of life. Along these lines, Sparrow and Chatman (this issue) provide a nice review of how the Internet affects social cognition (e.g., memory, creativity, and deployment of resources).

But what about interpersonal communication? When many people think about online communication, they think of viral content. Amazing music videos, shocking news articles, or pictures of cute cats that spread throughout the web, filling in-boxes along the way.

The web, however, is more than just an online water cooler around which people cluster. Since the advent of gestures and language, humans have shared news and information. Recently, researchers have begun to study the psychology behind social transmission, looking at why people share some things rather than others (Berger, 2011; Berger & Heath 2005; Berger & Milkman, 2012; Berger & Schwartz, 2011; Chen & Berger, 2013; De Angelis, Bonezzi, Peluso, Rucker, & Costabile, 2012; Frenzen & Nakamoto, 1993; Heath, Bell, & Sternberg, 2001; Packard & Wooten, 2013; see Berger, 2014, for a review). Technology, though, has had an important impact on interpersonal communication. Facebook, Twitter, and even e-mail now provide new ways to communicate with social ties. How has the Internet changed the psychological processes behind why people talk and share?

Compared to face-to-face communication, communicating over the Internet differs in five key ways. It is more likely to be (a) written, (b) undirected, and (c) anonymous and involves (d) larger audiences and (e) reduced social presence. Each of these differences has an important impact on what people talk about and share and why.

#### Shift Towards Written Communication

First, rather than involving oral communication, most Internet communication is written in nature. Although this may seem like a small and subtle shift

the difference in modality affects the synchrony of communication (Clark & Brennan, 1991; Morris & Ogan, 1996). Oral communication tends to be rather synchronous: One person says something, and another responds soon after. Consequently, interturn time is low and participants have to think on their feet. Written communication, however, is more asynchronous, where people respond hours or even days later. This delay gives people more time to construct and refine what to say (Berger & Iyengar, 2013; Walther, 2007). More than 70% of Facebook users, for example, edit at least some of their posts before they hit send (Das & Kramer, 2013).

This asynchrony has a variety of consequences. On the sharing side, it allows people to engage in selective self-presentation (Walther, 2011), such as talking about more interesting things (Berger & Iyengar, 2013) or being more polite during the interaction (Duthler, 2006). On the receiving side, curation can negatively impact message recipients. Facebook posters can take the time to write clever things or post only the photos that show them looking good and having fun. But this can make other users feel their own lives are worse by comparison (Chou & Edge 2012) and reduce life satisfaction as a result (Krasnova, Wenninger, Widjaja, & Buxmann, 2013).

Outside of asynchrony, written communication also reduces message mutation. As illustrated by the famous telephone game, messages often change through the communication process. Senders may say one thing, but recipients can't remember all the details to pass on to the next recipient (Allport & Postman, 1947). So rather than being a perfect copy, information often mutates along the communication process, as certain details are remembered and others are reconstructed incorrectly. But Internet communication can greatly reduce the mutation process because it reduces the reliance on memory. If people share links or copy and paste portions of text, the message should be less distorted through generations of transmission. Mutation can still occur when people share self-generated text, but distortion is likely reduced.

### More Undirected Communication

Second, Internet interactions are more likely to involve undirected communication. Communication can be directed (addressed toward a specific person or people) or undirected (sent without a particular person or people in mind). Offline communication tends to be directed. People call a particular relative on the phone or speak face-to-face to a certain neighbor. Even when talking to a group, we usually look at a particular person, directing our comment their way. But status updates, tweets, newsgroup posts, and other Internet communication allow people to communicate in a less directed manner. Rather than having to select a particular person to talk to, communicators can just put their thoughts or requests out there and see who (if anyone) responds.

Undirected communication may benefit well-being (Buechel & Berger, 2013). People often need social support, and reaching out to social ties is one way to get it. But after a negative emotional experience, people may be reticent to reach out to others. They don't want to bother people or seem needy and may worry about being rebuffed. Consequently, undirected communication may be particularly useful because it lets people have the opportunity for social connection and support without the same degree of risk. Rather than having to target (and potentially bother) one person in particular, undirected Internet communication lets people cast a wide net. This simultaneously decreases the weight put on any one tie and increases the number of potential responses people can receive, increasing perceived social support.

### More Anonymous

"On the Internet, no one knows you're a dog"—Peter Steiner

Third, Internet communication can provide anonymity. In most face-to-face communication, communicators' identities are disclosed. People know who they are talking to and can connect what that person says with that person's identity. Even phone calls involve identity disclosure unless someone calls from a blocked number. Online, however, people can hide their identity. On many sites, people can comment or post anonymously, and even on sites like Facebook and Twitter, people can create online personalities that are separate from their offline identities.

Anonymity has important implications for interpersonal communication. When behavior is publicly observable, social acceptance concerns are heightened (Goffman, 1959; Ratner & Kahn, 2002). But anonymity should reduce such concerns and free peo-

ple up to say whatever they want. Indeed, people are more willing to discuss controversial topics when their identity is hidden (Chen & Berger, 2013). Similarly, anonymity should encourage people to discuss taboo topics or counternormative viewpoints but also say nasty and repulsive things, all because their comments are not connected to their identity.

### Larger Audiences

Fourth, communicating over the Internet usually involves talking to larger audience. Conference calls and group conversations happen sometimes, but most offline conversations involve narrowcasting: talking one-on-one to a friend over the phone or a colleague in the hallways. Online communication, however, often involves broadcasting, or sharing to a much larger audience. Facebook status updates are blasted to all ones "friends" and tweets go out to thousands of followers.

Audience size impacts the transmission process by shifting sharer focus (Barasch & Berger, 2013). People have a natural tendency to focus on themselves, but narrowcasting encourages other focus because communicating with one person promotes individuation. This increased other-focus, in turn, leads people to self-present less and share more content that is useful to the message recipient (Barasch & Berger, 2013). Broadcasting, however, does little to move people from their natural tendency to for self-focus and, as a result, encourages self-presentation.

### Reduced Social Presence

Fifth, Internet communication reduces social presence. In face-to-face communication, the audience is quite salient. Because the audience is right there, communicators pay more attention to them and can notice even subtle changes in body language. Even phone calls have some social presence as people can hear their conversation partner's breath or pause before responding. But social presence is greatly reduced online. Although people can see or hear others on Skype, most online interactions occur through written media.<sup>1</sup>

The lack of social presence should reduce impression management concerns. Online communication can lull people into feeling that what they are sharing is private, that they are just writing to a diary that no one will see. The feeling of privacy may lead people to share things that might otherwise keep to themselves

<sup>1</sup>Although anonymity and social presence may seem related, they are distinct. People can post an anonymous comment on a blog, for example, or post one where their identity is disclosed, but in both cases the social presence of the audience is reduced compared to face-to-face discussion.

(and may regret having shared later, e.g., private stories).

Note that this possibility is particularly interesting given the permanency of most online communication. Online communication often leaves a written record that others can record and view later. Thus online may simultaneously lead people to feel like they can be extremely open (because of reduced social presence) while returning to haunt people later if they are not careful what they post.

### Conclusion

Online communication differs from offline communication in some important ways, and these differences shape both what people share and why.

Compared to offline, online communication is more likely to be (a) written, (b) undirected, and (c) anonymous and involve (d) larger audiences and (e) reduced social presence. Although some of these aspects exist in some offline conversations (e.g., writing letters), their combination provide a new and rich area for psychological investigation. We still know relatively little about why people talk about and share some things more than others, or how the channel people communicate through impacts the communication process.

Further, in addition to affecting communication, the Internet has made it easier to study interpersonal communication itself. Tweets, blogs, and online reviews are only a handful of the many available sources of real sharing behavior. Text mining and natural language processing allow researchers to pull insights from large corpuses of written information (Netzer, Feldman, Goldenberg, & Fresko, 2012; Tirunillai & Tellis, 2012). But even less complex tools (e.g., Linguistic Inquiry and Word Count) can shed light on a host of psychological processes (Berger & Milkman, 2012; Chen & Lurie, 2013; Pennebaker, Mehl, & Niederhoffer, 2003).

In conclusion, online communication not only impacts social cognition but opens up new avenues to study interpersonal communication and social transmission more generally.

### Note

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