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HOW NEED- AND NORM-BASED MOTIVES FOR DIGITAL COMMUNICATION MITIGATE THE CHILLING EFFECTS OF DATAVEILLANCE

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Introduction

In today's digital society, engaging in digital communication, such as searching for information or posting a comment, is not just the *norm* but also a fundamental means of fulfilling *needs*. However, being online comes at a cost: every digital trace left behind is constantly collected and analyzed by corporate and state actors. In addition to posing significant risks like privacy violations (Solove, 2006), this *dataveillance* can be perceived as salient, for instance through everyday online use or news exposure (Büchi et al., 2022). The perceived salience of dataveillance drives internet users' *sense of dataveillance* (i.e., their feeling of being dataveilled), making them more likely to expect negative yet uncertain *consequences* from their legitimate digital communication and thus self-inhibit their free digital communication. This processknown as the *chilling effects of dataveillance* (Büchi et al., 2022), can have unintended and socially undesirable consequences, potentially reducing civic and political participation as well as well-being (Kappeler et al., 2023; Stoycheff, 2016).

Although there is some empirical evidence to support chilling effects, these effects are often small and work on their determinants remains limited and fragmented (e.g., Stoycheff, 2023; Strycharz & Segijn, 2024b, 2024a; Stubenvoll & Binder, 2024). The lack of research and potential consequences of chilling effects warrant greater examination of the conditions under which this phenomenon holds or not. While many motives can drive online behaviors, we assume that internet users are particularly motivated to engage in digital communication based on their felt needs and perceived

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norms (Chung & Rimal, 2016; Katz et al., 1973), thereby reducing their susceptibility to chilling effects. This potential interplay has received limited attention.

This study investigates whether need- and norm-based motives for digital communication mitigate the chilling effects of dataveillance, i.e., the negative effects of a heightened sense of dataveillance on digital communication, for three behaviors: searching for information, expressing opinions, and disclosing personal information. We understand *motives* as sources of motivation that guide individual action (see Kleinginna & Kleinginna, 1981); here felt needs and perceived norms motivating digital communication.

Theoretical background

To examine the determinants of chilling effects, we rely on the theoretical model of the chilling effects of dataveillance (Büchi et al., 2022). This model posits that salience shocks, like data scandals, increase individuals' sense of dataveillance. A heightened sense of dataveillance amplifies expectations of negative consequences from digital communication, which can lead to self-inhibition.

A key question is what counteracts undesirable chilling effects. Since limiting internet use is often unrealistic, we adopt a uses and gratifications (U&G) and social norms approach to understand motivated digital communication in the context of dataveillance. We conceptualize need-based motives as felt needs for digital communication within the U&G tradition, which emphasizes that individuals actively engage in media use "to satisfy their needs" (Katz et al., 1973, p. 510).

The approach acknowledges that media users are part of social environments and thus are susceptible to normative influence (Blumler, 1979). To account for this, we draw on literature on social norms, i.e., "rules and standards that are understood by members of a group, and that guide and/or constrain social behavior without the force of laws" (Cialdini & Trost, 1998, p. 152). We conceptualize norm-based motives as perceived norms for digital communication, reflecting individuals' perceptions of a prevalent or expected behavior. These norms can help guide behavior and maintain social harmony (Chung & Rimal, 2016).

Based on these theoretical assumptions, the model in Figure 1 illustrates our two groups of hypotheses:

1. *Hypothesized mechanisms of chilling effects of dataveillance*. Perceived salience of dataveillance, treated as a proxy for a sense of dataveillance, is positively associated with expectations of negative consequences from digital communication. Both variables are positively associated with self-inhibited digital communication in response to a sense of dataveillance.

2. *Hypothesized moderators.* Need- and norm-based motives to engage in digital communication negatively moderate the relationships between these chilling effects mechanisms.

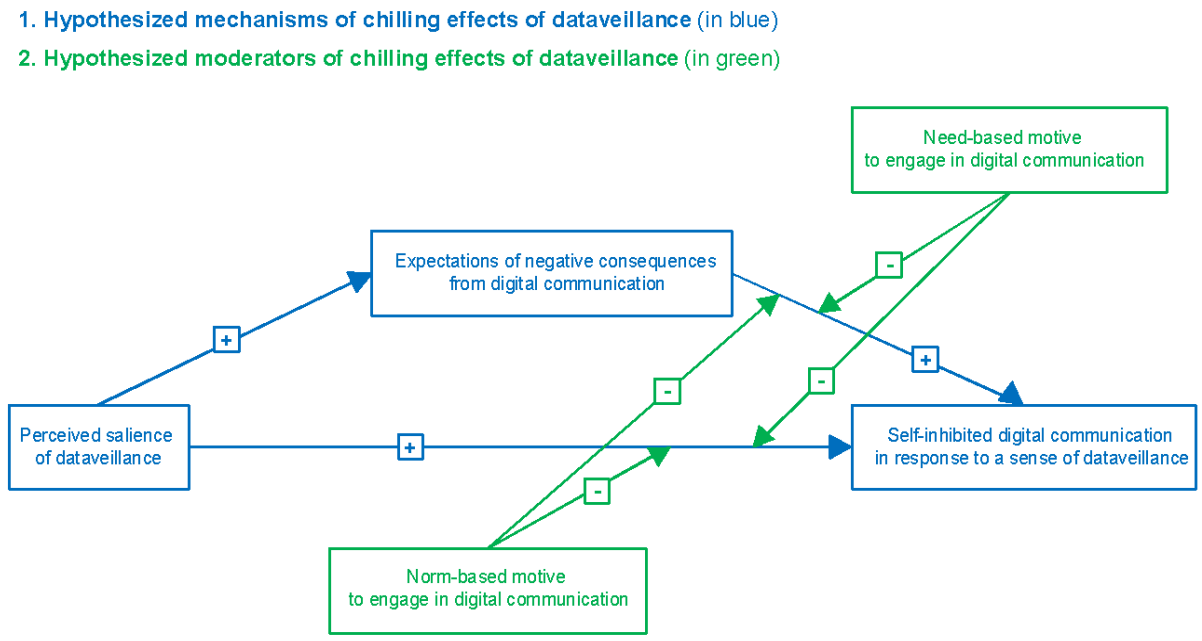

Figure 1. Model with hypotheses.

Methods

This cross-sectional study uses survey data from a representative sample of the Swiss-German internet population (N = 898). The sample was gender-balanced (50.7% female), with an average age of 47.2 (SD = 14.9, min = 16, max = 79). Most participants had medium (42.2%) or high (53.2%) education levels.

Following Figure 1, we measured perceived salience of dataveillance, a proxy for a sense of dataveillance, by asking how often participants noticed dataveillance online and talked, thought, and read or heard news about it. For each digital communication behavior, we measured expectations of negative consequences, need-based motives (e.g., *I feel the need to search for information on the internet*), norm-based motives (e.g., *to what extent is it normal or expected in your private or professional life to be online searching for information*), and frequency of self-reported self-inhibition in response to a sense of dataveillance.

We conducted path analyses with mediation and moderation using the *lavaan* package in R (Rosseel, 2012) with observed variables. Separate models were run for each digital communication behavior (searching for information, expressing opinions, disclosing personal information) with its related items.

Preliminary results

Chilling effects mechanisms. In the mediation models (without moderators), perceived salience of dataveillance and expectations of negative consequences from digital communication were significantly associated with self-inhibition in response to a sense of dataveillance (p < .05) for most behaviors. Consistent with our first group of

hypotheses, all three digital communication behaviors showed overall positive associations.

Need- and norm-based motives. In the moderation models, neither the need-based nor the norm-based motive significantly moderated the relationships between each independent variable (perceived salience, expectations of negative consequences) and self-inhibition. However, the need-based motive to express opinions significantly and positively moderated the relationship between perceived salience and self-inhibition of opinion expression (b = .086, SE = .04, p = .04). Our second group of hypotheses was not supported.

Conclusion

In today's digital society, where being online is a need and a norm, self-inhibited digital communication in the context of dataveillance carries costs for internet users. This study contributes to understanding whether need- and norm-based motives to engage in digital communication are strong enough to mitigate the chilling effects of dataveillance.

First, our work offers a novel perspective on how individual responses to perceptions of dataveillance interact with motivational factors driving digital communication. By integrating U&G and social norms approaches into chilling effects and user-centered dataveillance research, we advance the theoretical understanding of chilling effects' boundary conditions and contribute to the emerging body of work on this topic (Strycharz & Segijn, 2024b). Our empirical test of two new moderators suggests that need- and norm-based motives have limited influence on chilling effects, contrary to expectations.

Second, this study develops and tests a theory-based model providing evidence aligned with the core chilling effects hypothesis (Büchi et al., 2022). Although self-reported data may introduce bias and do not allow for causal inference, our results suggest the potential robustness of chilling effects, considering the significant associations between tested mechanisms and the lack of mitigating effects observed. We thus provide representative evidence on theoretically relevant determinants of chilling effects across three prevalent digital communication behaviors, highlighting the potential gravity of dataveillance effects in everyday internet use.

These insights help inform policy and technology design to minimize unintended consequences of dataveillance and safeguard free digital communication.

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