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He said, she said: Gender differences in the disclosure of positive and negative information[☆]

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ABSTRACT

Research on gender differences in (self-)disclosure has produced mixed results, and, where differences have emerged, they may be an artifact of the measures employed. The present paper explores whether gender – defined as self-identified membership in one's sociocultural group – can indeed account for differences in the desire and propensity to divulge information to others. We additionally identify a possible moderator for such differences. In three studies employing two distinct research approaches – a free recall task for the extreme desire to disclose (Study 1, $N = 195$) and scaled responses to scenarios that manipulate valence experimentally in an exploratory study (Study 2, $N = 547$) and a preregistered replication (Study 3, $N = 405$) – we provide evidence of a robust interaction between gender and information valence. Male participants appear similar to female participants in their desire and likelihood to disclose positive information but are less likely than women to want to share negative information with others, and less likely to ultimately act on that desire. Men are reportedly more motivated than women to disclose as a means of self-enhancement, and self-reports reveal that women perceive their sharing behavior to be relatively normative, while men believe themselves to be more withholding than what is optimal. Information disclosure is increasingly pervasive and permanent in the digital age, and is accompanied by an array of social and psychological consequences. Given their disparate disclosing behaviors, men and women may thus be differentially advantaged by, or susceptible to, the positive and negative consequences of information sharing.

1. Introduction

The advent of social media, online forums, and an increasing array of digital communication channels has enabled unprecedented levels of information sharing and interpersonal exchange. This communication can take manifold forms, including direct messages between close friends and loved ones, photograph sharing and status updates targeted at one's broader social network, and consumer experience reviews intended for unknown members of the public. Such communication can be inherently pleasurable (Tamir & Mitchell, 2012), engender health and psychological benefits (Frattaroli, 2006; Lambert et al., 2013; Pennebaker, 1997; Reis et al., 2010), and result in positive social outcomes (Altman & Taylor, 1973; Collins & Miller, 1994; Ensari & Miller,

2002; Miller, 2002). At the same time, these new opportunities for self-expression take on a public and often permanent character, amplifying the potential for material and reputational damage resulting from self-disclosure (Brandimarte, Vosgerau, & Acquisti, 2018; Hofstetter, Ruppell, & John, 2017). To the extent that there is variation in disclosing behavior among different segments of the population, these subgroups may be differentially advantaged by, or vulnerable to, the consequences of information sharing.

One of the most heavily researched group differences in disclosure is that between men and women. Some of the earliest work in this area (e. g., Jourard & Lasakow, 1958) revealed sharp gender differences in disclosure, inspiring several decades of investigations demonstrating that women disclose more information to a wider array of individuals

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than do men (e.g., Rimé, Mesquita, Philippot, & Boca, 1991). However, meta-analyses of studies conducted during that period revealed at best a modest, non-homogenous effect of gender on disclosure that is sensitive to features of the experimental design and context (e.g., Dindia & Allen, 1992; see *Literature Review Section 2* for an extended discussion of these studies). Moreover, much of the existing research on gender differences predate the Internet, which has magnified the consequences of sharing and may have produced new patterns of sharing behavior, including differences between demographic groups. Thus, novel, contemporary research on this topic is needed.

The present work addresses that need. We present three studies that attempt to clarify the relationship between gender and disclosure, and to reconcile the contradictory results in the literature to date. We employ both qualitative (Study 1) and quantitative (Studies 2 and 3) measures and adopt research paradigms that depart from convention in this research area. Perhaps the most prominent departure is that our empirical focus is not solely on actual disclosing behavior, but also on differences in the psychological desire to disclose (see Carbone & Loewenstein, 2023 for an extensive discussion of the psychological "drive" to disclosure). As a result, we overcome constraints that limit generalizability of existing findings and provide a richer examination of gender differences in disclosure. In Study 1, participants engaged in a free recall task in which they retrieved from memory instances in which they were "dying" to tell someone something and reported whether or not they ultimately shared the information. In Studies 2 and 3, we quantified the desire to disclose and aggregated participants' desire as well as propensity to disclose positive or negative information about myriad topics and experiences. Taken together, we believe this approach provides a better measure of consequential, real-world disclosing behavior than prior research (see *Section 2.1* below for details).

The results from these studies present a robust systematic pattern of differences in disclosure along gender lines: Men experience a weaker psychological desire to disclose and are less likely to act on that desire. However, the results from the first two studies revealed a consistent, and to the best of our knowledge not previously identified, nuanced pattern: The tendency for women to disclose more than men depends crucially on the valence of the information shared. Men and women exhibit a similar desire and likelihood to disclose *positive* information, but men have a substantially lower desire and likelihood to disclose *negative* information than women.

Specifically, male survey respondents in Study 1 were less likely than female respondents to have experienced an intense desire to share negatively-valenced information, but a similarly intense desire to share positively-valenced information. In Study 2, where the desire to disclose was quantified and valence experimentally manipulated, we found that men were equally eager and likely to share positive information but experienced a weaker desire, and were significantly less inclined, to disclose negative information than women. Study 3, a pre-registered test of the limits of this moderating variable, confirmed that the interaction between gender and valence is robust. In addition to having practical implications, identifying the moderating role of content valence may help to resolve conflicting results in the prior literature (see *Discussion Section 6*).

In what follows, we review the extant literature on gender differences in self-disclosure, highlighting the ways in which our approach departs from convention and the advantages thereof. We also discuss theoretical explanations for gendered disclosure that can account for our findings.

2. Literature review

Gender differences in disclosure have been examined extensively, both generally and in interaction with topic and target of the disclosure, using a variety of research paradigms. This empirical attention may be the result of a widely held stereotype that women are more talkative than men, a sentiment featured in proverbs across multiple languages

(Holmes, 1998). The focus of social and behavioral science research has been on gender differences not in overall communication rate but rather in terms of *self-disclosure*, defined as "making the self known to others" (Jourard & Lasakow, 1958, p. 91) through "any information exchange that refers to the self, including personal states, dispositions, events in the past, and plans for the future" (Derlega & Grzelak, 1979, p. 152). The findings from this literature have, however, been somewhat mixed, as gender differences in self-disclosure appear to be sensitive to features of the experimental design and context.

This is best illustrated by two meta-analyses on disclosure conducted around the same time by Dindia and Allen (1992) and James and Drakich (1993). The former reviewed 205 studies published between 1958 and 1989 and found an overall main effect of gender, in which women disclosed more than men (Cohen's $d = .18$). This effect, however, was observed only in studies of direct observation, wherein women were more likely than men to disclose to strangers; no difference was found for survey (i.e., self-report) measures. The latter meta-analysis (James & Drakich, 1993) encompassed 56 studies published between 1951 and 1991 that exclusively involved mixed-sex interactions. Unlike Dindia and Allen (1992), the authors found that male participants disclosed more than females in 42.9% of the studies and observed either no gender difference or a complex pattern of differences in more than half of the remaining studies (51.9%). The authors explain that relative status, combined with the tendency to conform to performance expectations, can cause men to disclose more in certain circumstances (e.g., formal tasks such as staff meetings) but less in others (e.g., informal activities such as unstructured conversations). Because gender differences in disclosure depend crucially on the situational context of an interaction, such as status differences and social expectations (Aries, 2009), research findings on gendered disclosure are sensitive to how such features are manifest in the research design and how disclosure is elicited and measured in the research setting.

The typical research paradigm operationalizes disclosure using either self-report or behavioral measures. Research relying on self-report measures conventionally asks participants to rate their prior propensity (retrospective disclosure, e.g., Sheldon, 2013) or future likelihood/willingness (prospective disclosure, e.g., Snell, Miller, & Belk, 1988) to disclose specific types of information to specific categories of people. For instance, Argyle, Trimboli, and Forgas (1988) asked university students to rate their likelihood of discussing each of 19 topics with a target person belonging to each of 12 different relationship categories (e.g., romantic partner, sibling). The authors found no main effect of gender in overall likelihood to communicate and instead observed a series of interactions between respondent gender, topic, and relationship to the target of the disclosure. This approach has more recently been extended to the study of online activity, in which women often self-report higher levels of disclosure on social media sites (e.g., MySpace, Friendster; Bond, 2009) and to exclusive (but not recently-added) Facebook friends (Sheldon, 2013) than their male counterparts.

Alternatively, behavioral measures have been employed to study gendered disclosure, typically through the analysis of (i) written or verbal disclosure in response to a research question, for which the experimenter is the presumed target (e.g., Carpenter & Freese, 1979), or (ii) conversation transcripts from dyadic interactions over a specific topic between study participants, where the target of the disclosure is often a stranger (e.g., Mallen, Day, & Green, 2003). Disclosure in such investigations has been operationalized in a variety of ways. For instance, Archer and Berg (1978) found that female participants disclosed more than males in terms of breadth, measured as overall word count, whereas Brooks (1974) found no main effect for gender when tallying the number of "I" statements followed by an affect word.

Paradigms employing either type of measure (i.e., self-report or behavioral) impose constraints on what can be measured. The first issue involves the specification of a conversational target. Naturalistic or experimental research on dyadic interactions necessarily examines people in specific pairs (e.g., McNelles & Connolly, 1999; Murstein &

Table 1
Departures of present research from extant literature.

	Existing Research	Present Research
Focal Measure	<i>Disclosing Behavior</i> Self-reported willingness/ likelihood to disclose or actual (observed) disclosure <i>Self-Relevant Information</i> Exchange of information about the self (e.g., personal characteristics, experiences, preferences, etc.)	<i>Psychological Desire to Disclose</i> Self-reported (intensity of) the desire to disclose, irrespective of actual disclosing behavior <i>Self- or Other-Referential Information</i> Exchange of information about oneself or others <i>Unspecified Domains (Study 1)</i> Self-reported experience of the intense desire to disclose <i>Prespecified Domains (Studies 2,3)</i> Domains adapted from those specified by Study 1 participants <i>Unspecified Target</i> Any individual(s) serving as (desired) target by discloser
Disclosure Topic	<i>Prespecified Domains</i> Experiences, emotions, thoughts, etc. specified by researcher	
Disclosure Target	<i>Prespecified Target</i> Individuals or relationship categories specified by researcher	

Adler, 1995), and (self-report) survey research typically asks participants to anticipate or reflect on their disclosing behavior vis-à-vis specific targets that are of interest to the experimenter (e.g., male/female friend, parent). Research has shown that target characteristics – even beyond the relative status of conversational partners, discussed above (James & Drakich, 1993) – can moderate disclosure. For example, women tend to share more with spouses (Morton, 1978) and close friends (Stokes, Fuehrer, & Childs, 1980) than men do, whereas men share more with strangers, particularly women that they just met (Derlega, Winstead, Wong, & Hunter, 1985), and this pattern extends to newly-added online friends as well (Sheldon, 2013). In general, women appear to disclose to a wider array of individuals relative to men, who typically shared with a narrower subset of people (Rimé et al., 1991).

Additionally, the relationship between conversational partners can interact with topic and/or the demands of the conversational task to influence disclosure. This highlights a second constraint: Participants are typically asked to write about or discuss a specific, pre-determined topic, but research has shown that men and women differ in the topics they are willing to disclose (e.g., Consedine, Sabag-Cohen, & Krivoshe-kova, 2007). For instance, women are more willing than men to reveal personal information (Parker & Parrott, 1995) and information about their feelings (Davidson & Duberman, 1982), and Derlega, Durham, Gockel, and Sholis (1981) observed gender differences for “feminine” topics (e.g., personal concerns, sensitivities) but not on “neutral” or “masculine” topics. Men and women also exhibit differential disclosure with respect to specific emotions: Balswick and Avertt (1977) asked participants how often they had disclosed 16 different emotions (falling into the broad categories of hate, love, sadness, and happiness) to anyone, and found that female respondents were more expressive than males of their feelings of hate, love, and sadness. Snell et al. (1988) observed a slightly more complicated pattern in which women were more willing than men to share feelings of depression, anxiety, anger, and fear with female friends and romantic partners (but not with male friends; Snell et al., 1988). This presents the possibility that inconsistent gender differences in existing research may in part be an artifact of the researchers' choice of target and/or topic of the disclosure under study.

2.1. Present research: Departures from existing literature

The research we present here differs from prior research in three ways, as summarized in Table 1. First, and most importantly, whereas existing research has mainly focused on how men and women differ in their disclosing behavior in self-reports or observed interactions, the present research investigates gender differences in the psychological desire to engage in information sharing. Actual disclosing behavior depends both on the desire to disclose and concerns about the expected positive or negative consequences of doing so. By focusing on the desire rather than the behavior, we seek to isolate the disclosure-impetus side of the disclosure calculus.

Second, we allow for experiences and information that constitute a disclosure to be ostensibly not self-relevant (i.e., about others rather than oneself) – in fact, we experimentally manipulate self-relevance in Study 3. We maintain that any exchange of information, even that which does not refer specifically to the self, reflects upon, and has consequences for, the discloser (e.g., Berger & Heath, 2007; Chung & Darke, 2006; Lampel & Bhalla, 2007) and is thus of empirical interest.

Third, as a consequence of our focus on the psychological desire to disclose information, we do not measure participants' disclosure to specific categories of people but are agnostic as to the target of the disclosure, and allow participants to indicate whether they wanted to, and ultimately did, disclose the information to anyone. Additionally, our disclosure measure is either topic-free (Study 1) or asks about specific domains derived from the open-ended responses of both male and female Study 1 participants, covering a breadth of experiences (Studies 2 and 3). This departure is crucial as, in an age of unprecedented and diverse opportunities for interpersonal communication, disclosure can

occur in a very wide range of contexts, and of greatest importance is not one's disclosing behavior in specific situations but rather across the many contexts that comprise daily life.

Using this methodological approach to capture desired and actual disclosure across manifold combinations of topic and conversational partners, we identify and test a moderating variable that may help to reconcile the inconsistent results on gendered disclosure: informational valence. After having a negative personal experience, individuals often seek catharsis (Alicke et al., 1992), and sharing the negative information can ameliorate the negative impact of such an experience through the provision of comfort and consolation (Rimé, 2009) and increased perceived social support (Buechel & Berger, 2012). At the same time, those who share negative emotions are typically perceived as less likable (Forest & Wood, 2012), whereas sharing positive emotions increased ratings of warmth and competence (Ludwig et al., 2022).¹ Thus, negative disclosure can entail a psychological benefit at a reputational cost. To the extent that men and women have different motivations for disclosing, we might expect to see a tendency for men and women to share different types of information.

Gender differences in disclosure are generally attributed to sex roles, expectations, and socialization. Men and women internalize norms about what they, respectively, should do and how they should behave (Eagly, 1987), and, as a result, employ different rules and criteria for their disclosure decision-making in order to conform to gender-specific expectations (Petronio, 2002). As behavior largely converges to norms, stereotypes emerge that in turn generate or reinforce expectancies and implicit prescriptions in the form of “display rules,” that is, “cultural norms regulating how, when, and where emotions can be expressed by males and females in any particular culture” (Brody & Hall, 2008, p. 396). Disclosers who violate these rules by revealing topics or emotions that are incompatible with their sex-role orientation are then viewed negatively (e.g., as maladjusted) by conversational partners (Derlega et al., 1981; Derlega & Grzelak, 1979).

Such a theoretical perspective can account for why men may disclose less than women, for example, due to the expectation that men should “appear tough, objective, striving, achieving, unsentimental, and emotionally unexpressive” (Jourard, 1971, p. 35). But it can also explain why men might share less *negative* information than women. In western culture, men are socialized to boast about themselves in an effort to emphasize their masculinity (McGuire, Graves, & Blau, 1985) and compete for status, resources, and attention from women (Buss, 1988). At the same time, women are socialized to refrain from self-promotion (Rudman, 1998), which is deemed “unfeminine” (Janoff-Bulman & Wade, 1996), and to be communally-oriented (collectivist) rather than self-centered (individualistic; Eagly, 1987). This entails being “more sensitive to the feelings of others and more concerned with preserving a sense of harmony and mutual satisfaction in the relationship” relative to men (Heatherington, Burns, & Gustafson, 1998, p. 890). As a result, a woman may avoid discussion of her individual success or positive experiences, particularly in interactions with others perceived to be vulnerable (Heatherington et al., 1998). In line with these sex roles and social expectations, one might expect that self-presentation is a primary consideration for male disclosure decision making, whereas, according to the stereotype, women would be more concerned with issues of intimacy (Collins & Miller, 1994).

Work by Dolgin and Minowa (1997) relates closely to this idea of (male) disclosure as motivated by self-presentation or self-enhancement. Participants in this study indicated how much they had disclosed to four individuals (e.g., best male friend) across 55 topics that varied in terms of intimacy and potential “flatteringness” (i.e., topics that would make

¹ It is worth noting that this study relates to how sharing information in the workplace influences co-worker perceptions. Interestingly, male and female sharers benefited equally from disclosing positive emotions compared to negative emotions or neutral (i.e., autobiographical) information.

them look good to the target of their disclosure). The authors observed a three-way interaction wherein women were significantly more likely than men to disclose unflattering information to female friends. This is consistent with our account of the moderating role of valence, to the extent that negative information is seen as unflattering.

Other papers have explored gendered disclosure across specific emotions (e.g., joy, sadness, etc.; Balswick & Avertt, 1977; Studies 1, 4 in Rimé et al., 1991; Snell et al., 1988), but only two have considered the superordinate perspective of valence (i.e., positive vs. negative). In the first (Rimé et al., 1991), participants in four of six total studies (Studies 2, 3, 5, 6) were assigned to describe specific life events (e.g., professional advancement, romantic breakup) that were pre-determined to be positively, negatively, or ambiguously emotionally evocative, then asked to report whether or not they had spoken to anyone about the event, and if so, how soon afterwards, how often, and with whom. The authors observed interactions between gender and disclosure target but not emotion/life event. However, unlike the design employed in Studies 2 and 3 of the present paper, none of these six studies experimentally manipulated valence while holding constant the domain of the experience, which confounds interpretation.

The second study (Berman, Murphy-Berman, & Pachauri, 1988) asked American and Indian participants to rate on a 5-point scale how free they would feel to discuss with their best same-sex friend topics that varied in terms of both valence (positive vs. negative) and subject (family vs. self). The authors reported no overall interaction between gender and valence but did observe a three-way interaction among Indian respondents (i.e., males were more reluctant to disclose negative information about family). This study suffers from several limitations. First, conclusions about overall disclosing behavior are drawn from responses regarding a single target (i.e., their best same-sex friend). Additionally, given their ultimate research goal of a cross-cultural comparison, the authors faced the challenge of selecting topics that were applicable to two highly disparate populations; as a result, they ultimately selected a very specific subset of topics and chose to include only information “that could potentially be embarrassing if revealed to another” (Berman et al., 1988, p. 65). We share the authors' intuition that the relationship between gender and valence might vary based on *whom* the information is about, and we similarly test this possibility in Study 3; however, we employ a broader conception of “other” to include information that is about anyone other than the self, rather than exclusively family vs. non-family members as is done in Berman et al. (1988).

This last paper highlights the importance of culture in determining disclosure along gender lines, particularly given that the sex roles of men and women can vary dramatically across ethnicities and cultures. There is, however, a dearth of cross-cultural studies (Dindia & Allen, 1992). Exceptions² include studies conducted in Israel (Nevo, Nevo, Zehavi, & Milton, 1993) and Pakistan (Sultan & Chaudry, 2008), in which women were found to disclose more in the specific contexts investigated (i.e., gossip and disclosure to friends, respectively), as well as India (Berman et al., 1988) and Jordan (Jaradat, 2020), wherein the authors tested for and observed a more complex pattern of results (i.e., interactions between gender, topic, and target). What may be more important than specific culture in determining disclosure patterns is whether the society is individualistic or collectivist – that is, whether priority is given either to personal goals or loyalty to group goals. Fisher and Manstead (2000) found that men in individualistic cultures tend to minimize (non)verbal emotional expressions (e.g., shame, guilt), as such expressions can threaten their control and, by extension, their status. As such, it is reasonable to question whether any observed gender differences found in a sample of American participants will hold in collectivist cultures.

Below we present the design and results for each of the three studies:

² We exclude here studies that solely investigated disclosure among adolescent participants.

an exploratory study that employs a novel qualitative measure of disclosure, hints at valence as a moderator of gender differences, and provides tentative support for the role of self-enhancement in determining such differences (Study 1); a study that employs a novel quantitative measure of disclosure and tests the moderating effect of valence experimentally (Study 2); and a preregistered replication of Study 2 that includes the test of a boundary condition of the valence moderator, i.e., the self-relevance of the content disclosed (Study 3). We conclude with a discussion of the implications and limitations of these findings. Throughout the remainder of the paper, we report how we determined our sample size, all data exclusions (if any), all manipulations, and explicitly state whether all measures in each study are reported. The complete surveys (in both Word and .qsf format), data, and code behind all analyses for all three studies can be accessed at: https://osf.io/gtmnp/?view_only=ca5ff781c6c64db58da5eebfed49e49d. Closed-ended questions were analyzed using STATA/SE 15.1, and open-ended responses were coded using MAXQDA. The data for all studies were collected and stored in accordance with the guidelines approved by the Institutional Review Board at our university.

3. Study 1: Participant-generated instances of “dying” to disclose

Study 1 was an exploratory study that employed a novel qualitative measure to capture the desire to disclose. Specifically, we asked participants to self-generate two episodes in which they were “dying to tell someone something” and investigated gender differences in the experience of this desire, the likelihood of acting upon it by actually engaging in disclosure, the types of information evoking such a desire, and the basic motivations underlying it. In doing so, we observed gender differences in the desire and propensity to disclose and unearthed a possible moderator of this effect – information valence – as well as possible underlying mechanisms.

3.1. Materials and methods

3.1.1. Participants

A total of 195 participants recruited from a panel of alumni from a private northeastern American university completed the survey. A breakdown of participants' demographic information can be found in Appendix Table A.1. Our only exclusion criterion was selecting a gender option other than “male” or “female;” two participants fell into this category, resulting in a final sample of 193 participants (98 females, 95 males). Given the exploratory nature of this study, power analyses and sample size determination were not conducted *ex ante*. Instead, we used a heuristic judgment to obtain an approximate sample size of $N = 200$. This sample size provided 80% power to detect an effect size of $d = .23$ or greater in an independent-proportions z -test of our primary outcome variable – *Extreme Desire to Disclose* (henceforth, *DTD*) – with a 5% false-positive rate.

3.1.2. Procedure

Upon accessing the Qualtrics survey, participants were asked whether they had ever felt like they were “dying” to tell someone something. If so, they described the first such instance that came to mind and could thus select freely from experiences that were either positive (e.g., a new romance) or negative (e.g., a job loss) and about oneself or others. Participants then indicated whether or not they ultimately shared the information with others. Those who had reportedly disclosed this top-of-mind experience were subsequently asked to recall (and describe) a time when they had similarly felt like they were “dying” to tell someone something but had opted *not* to act on that desire; conversely, participants who indicated that they had not disclosed the first experience were asked to recall (and describe) a time when they felt like they were “dying” to tell someone something and *did* ultimately disclose the experience to others. At the end of the survey, all

participants answered closed-ended questions about the motives underlying their desire to disclose. The survey included additional exploratory questions intended to inform future studies that are not analyzed in the present paper. The median time taken to complete the survey was approximately 15 min. This study's design and analysis were not preregistered.

3.1.3. Measures

3.1.3.1. Desire and propensity to disclose. Our primary dependent variables were captured using two binary (i.e., Yes/No) self-report items for each of two instances recalled: “Have you ever felt like you were ‘dying’ to tell someone something?” (*Extreme DTD*) and “Did you end up telling someone?” (*Actual Disclosure*). Additionally, all participants answering “Yes” for *Extreme DTD* were asked to recall (a) an instance in which they ultimately disclosed and (b) an instance in which they did not. The *Habitual (Non)disclosure* measure reports the portion of respondents who could recall only (a), only (b), or both (a) and (b). Participants were also asked to describe their *Extreme DTD* experiences, which served two functions: First, it provided a measure of actual disclosure in the study context, that is, the number of words participants used in disclosing anonymously to the researchers (*Wordcount*)³; and second, it allowed us to examine the content of both experiences that were ultimately shared vs. not shared with others outside the study context.

3.1.3.2. Valence of disclosure. Two independent undergraduate research assistants, blind to respondents' gender and any research goals or hypotheses, were tasked with evaluating whether each response, taken in its entirety, was best characterized as “Positive,” “Negative,” or “Unclear/Mixed Emotion.” Inter-coder reliability (Krippendorff, 2011) is reported in the results section, and coding disagreements were resolved by the judgment of a third independent coder.

3.1.3.3. Motives for disclosing. A final question had participants select all motives that might have been driving their extreme desire to share (*Motives*). We compared the proportion of men and women selecting each motivation to provide insight into the underlying processes driving any observed gender differences in disclosure.

3.2. Results

Because this study was exploratory, all group differences presented below rely on two-tailed tests of statistical significance.

3.2.1. Desire and propensity to disclose

The majority of participants (83%, $n = 161$) answered “Yes” to having experienced an *Extreme DTD*, but the proportion experiencing an intense desire to disclose varied significantly across gender. Female participants were significantly more likely to have had this experience (89 out of 98, 91%) than their male counterparts (72 out of 95, 76%), $\chi^2(1, N = 193) = 7.88, p = .005, d = .41$. Gender was predictive of *Actual Disclosure*, $\chi^2(1, N = 159) = 6.11, p = .047, \phi = .19$, and twice as many male as female participants were unable to recall any instance in which they acted on their extreme desire to disclose the information (*Habitual (Non)disclosure*: 10 men, 5 women). There is, however, no difference in *Wordcount* between men and women, $t(261) = 1.06, p = .290, d = .13$.⁴

3.2.2. Valence of disclosure

Open-ended responses were coded for overall valence, identifying each response as either “Positive” (45%), “Negative” (34%), or as

³ It is worth noting that, however, that word count captures only willingness to disclose within the study context.

⁴ To normalize the distribution, a t -test was performed on the natural log of *Wordcount*.

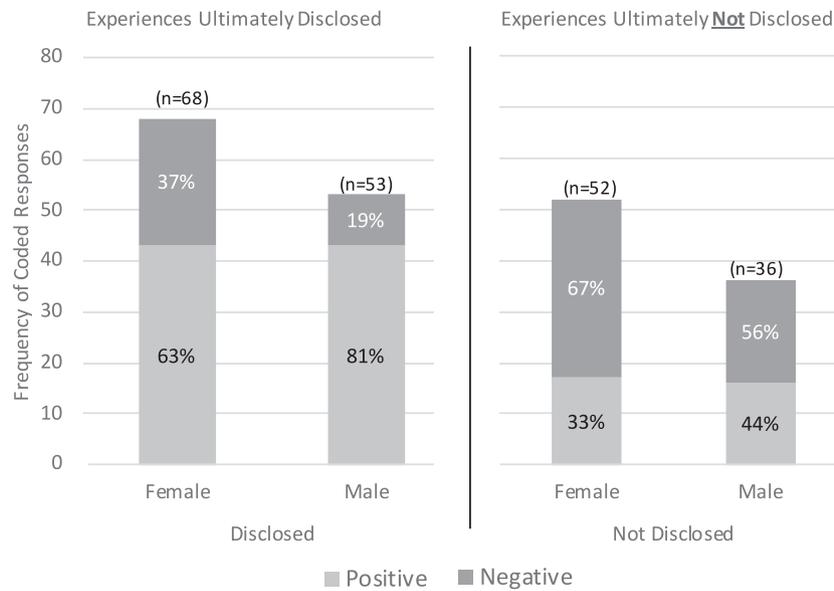


Fig. 1. Frequency of responses coded as positive or negative by gender and actual disclosure. Bar height represents the number of female vs. male participants able to recall each type of instance, i.e., times they acted on their intense desire to disclose (left panel) and times they did not (right panel). Each bar is broken out proportionally by the number of responses coded as positive vs. negative.

Table 2

Proportion of participants selecting each possible motive as driver of their intense desire to disclose (multiple selection).

	Total (N = 161)	Females (n = 91)	Males (n = 73)	p-values	Effect size d
To achieve a sense of closeness/intimacy with others	57%	56%	60%	0.651	0.07
To receive validation	44%	36%	51%	0.049	0.31
To make this information more widely known	36%	37%	35%	0.757	0.05
To learn how others value this event/information	35%	29%	42%	0.099	0.26
To be praised	32%	27%	39%	0.108	0.26
To feel that I am understood	32%	28%	35%	0.366	0.14
To entertain others (i.e., because others would find it interesting)	30%	22%	39%	0.024	0.36
To “re-live” the experience through retelling the story	24%	22%	26%	0.564	0.09
To be comforted	21%	27%	14%	0.043	0.32
To make it seem more “real”	21%	24%	18%	0.392	0.14
To receive advice	21%	22%	19%	0.640	0.07
To reinforce my own image of myself through retelling	19%	13%	24%	0.096	0.26
To hear alternative interpretations of the event/information	18%	15%	21%	0.300	0.16
To influence the way that people think of me	17%	12%	22%	0.096	0.26
To justify future action/continuation of a behavior	16%	10%	21%	0.058	0.30
To see whether others have had similar experiences	12%	13%	10%	0.462	0.12
To demonstrate my comfort with the information	9%	10%	7%	0.478	0.11
To elicit similar divulgence of information from others	9%	6%	11%	0.203	0.20
To diminish sense of guilt/culpability	4%	3%	4%	0.791	0.04
To be criticized/punished	1%	0%	1%	0.265	0.18
Other	19%	19%	19%	0.956	0.01

Note: Statistical comparisons based on a two-sample test of proportions. Significant p-values appear in bold.

“Unclear” (13%) or “Mixed Emotion” (8%) (reliability score = .75). For instance, the following verbatim response was coded as conveying negative information:

“.. a feeling comes: it's that urge to gossip in a negative way. ‘You won't believe what she said when he confronted him about his affair!’” – Female respondent, 65+ years of age.

whereas the response below was categorized as positive:

“I was accepted in Grad school, and wanted to tell a friend.” – Female respondent, 65+ years of age.

The analyses that follow, which exclude those responses for which valence was coded as unclear (n = 34) or emotionally mixed (n = 20), reveal a significant interaction between gender and valence: A substantially greater proportion of male than female responses (66% vs. 50%) were coded as positive, $\chi^2(1, N = 209) = 5.53, p = .019, \phi = .16$. In

Fig. 1, these results are broken out by *Actual Disclosure* and we observe that, upon experiencing an intense desire to share information, both men and women were more likely to disclose than not, and a higher portion of the information disclosed was positive (relative to information ultimately not disclosed). Overall, female participants were more likely than males to report an intense desire to share negative information, and the information ultimately shared by men was significantly less likely to be negatively valenced than that ultimately disclosed by women, 19% vs. 37%, $\chi^2(1, N = 121) = 4.64, p = .031, \phi = .20$. While the same pattern holds directionally for information that was ultimately withheld (56% vs. 67%), this difference was not statistically significant, $\chi^2(1, N = 88) = 1.25, p = .263, \phi = .12$.

3.2.3. Motives for disclosing

An analysis of *Motives* offers some insight into the mechanisms underlying the gender differences described above. In Table 2, we observe

that the motives selected more often by male relative to female participants overwhelmingly related to self-presentation. That is to say, men were significantly more likely to report being driven to disclose by a desire to enhance their image. Specifically, a two-sample test of proportions reveals that significantly more males reported disclosing in pursuit of the following self-enhancing aims: to entertain others,⁵ $z = 2.26, p = .024, d = .36$; to receive validation, $z = 1.97, p = .049, d = .31$; and, marginally, to influence how others see them, $z = 1.67, p = .096, d = .26$; to reinforce one's own image of oneself, $z = 1.66, p = .096, d = .26$; and to learn how others value the information, $z = 1.65, p = .099, d = .26$. Men also reported a marginally higher likelihood of pursuing the strategic goal of justifying one's actions or the continuation of a behavior, $z = 1.90, p = .058, d = .30$. Conversely, women more frequently indicated that they engage in disclosure in order to receive comfort from others, relative to men, $z = 2.02, p = .043, d = .32$.⁶

4. Study 2: Desire and propensity to disclose positive vs. negative information

Study 1 revealed gender differences in the experience of an intense desire to disclose and the likelihood to act on that desire, which might both vary by valence. The results also suggested that men and women may have different motivations for disclosing. This, in turn, may influence the instances they recalled. Additionally, the deliberate focus on extreme cases precluded an examination of gender differences in the desire and propensity to disclose other, perhaps more commonplace experiences or events. We address both these limitations in Study 2 by introducing a quantitative measure of participants' desire to disclose various, pre-specified topics/experiences, and by experimentally manipulating the valence of these events to control for potential differences in the selective recall of positive and negative experiences. Furthermore, this design offers a clean test of the moderating role of valence on disclosing behavior.

4.1. Materials and methods

4.1.1. Participants

Alumni from a private northeastern university who were not invited to complete Study 1 were recruited for this study. As in Study 1, our only exclusion criterion for participants who reached the end of the survey was selecting a gender option other than "male" or "female." Based on this criterion, four participants were excluded from analysis, leaving a total of 547 participants (287 females, 260 males, age: $M = 49.5$ years, $SD = 15.37$; see Appendix Table A.2 for a complete demographic breakdown.) A power analysis was used to determine an appropriate sample size. Based on pilot data ($N = 703$), we assumed an effect size of $d = .24$ (group difference = .55; group $SD = 2.25$) for our DTD measure (described below). With power = .80 and an alpha = .05, the necessary sample size to power a two-sample t -test of mean ratings is $N = 264$ per group, according to STATA's PSS (Power and sample-size analysis for hypothesis tests). This sample size provided 80% power to detect an effect size of $d = .21$ or greater in an independent-samples t -test of our primary outcome variable with a 5% false-positive rate. No additional sampling took place after results were observed.

⁵ Prior research (e.g., Berger, 2014) has linked the disclosure of entertaining things to impression management, but it is feasible that this motive also reflects a concern for others.

⁶ Male participants selected, on average, a greater variety of motives ($M = 5.18, SD = 2.88$) than female participants ($M = 4.34, SD = 2.50$) as possible drivers of their desire to disclose, $t(159) = -1.99, p = .048, d = .32$.

4.1.2. Procedure

The stimuli in this study consisted of 17 specific experiences (henceforth, "scenarios")⁷ developed based on the open-ended responses from Study 1. Together, these experiences encompassed a breadth of life experience necessary to ensure generalizability and avoid artifactual gender differences (see Literature Review) Section 2. With two exceptions (i.e., hearing a news story or a piece of juicy gossip) wherein the focal actor was another person, these scenarios directly involved the self, asking respondents to reflect either on an event that happened to them directly or their own emotions surrounding an event that happened to someone else.

There were two versions of each scenario (34 versions total), which were identical but for the valence of the experience, as in the following example: "Have you ever received feedback that *reaffirms* something that you have always taken pride in believing about yourself?" (Positive) vs. "Have you ever received feedback that *makes you question* something that you have always taken pride in believing about yourself?" (Negative; emphasis added; see Appendix Table A.3 Panel A for a complete list of scenarios, and Panel B for sample size per scenario). Participants were randomly assigned to one of two stimuli sets, each containing either a positive or negative version of each scenario, with valence counter-balanced across the sets. The order in which participants were exposed to a given scenario version within the set was randomized.

Each participant was initially asked whether or not they had ever experienced the specific scenario and, if so, they were presented with a series of follow-up questions about their experience. To avoid fatigue, participants were asked follow-up questions only for the first five scenarios that they reported having experienced,⁸ after which they proceeded to a battery of questions measuring personality traits and demographics. The survey included additional questions that were not the focus of the current investigation and are thus not analyzed below. The median survey duration was approximately 14 min. The study's design and analysis were not preregistered.

4.1.3. Measures

4.1.3.1. Desire and propensity to disclose. Desire to disclose (DTD) each scenario was captured with the question, "Did you have a desire to tell someone else about this? Don't think about the costs and benefits of doing so, only whether you felt a desire to tell someone about the experience." (Scale: -5 (*Intense, Overwhelming Desire to Withhold*) to 5 (*Intense, Overwhelming Desire to Share*)).⁹ Actual disclosure (*Disclosed*) was measured by asking participants whether they ultimately shared each experience with others (Yes/No/Not sure).¹⁰ As secondary behavioral measures, we offered participants the option to describe the details of their experience and captured whether participants availed themselves of this opportunity (*Described*; 1 if so, 0 otherwise) as well as

⁷ While the survey included 18 total scenarios, one of these varied in terms of the actor involved (i.e., whether one felt misunderstood by a significant other vs. a close friend) rather than valence. We exclude this scenario from any analysis of valence.

⁸ The average participant was asked if they had ever experienced an average of 7 scenarios ($M = 7.28, SD = 2.50$) and answered follow-up questions for an average of 5 scenarios ($M = 4.85, SD = .37$).

⁹ In some scenarios, the focal element is a specific emotion, while in others it is a specific experience. In all cases, however, we neither specify nor capture whether participants are reporting their desire to disclose their thoughts and feelings about, or reactions to, the event, or merely the fact(s) of the event itself. While this leaves open the possibility that differences in the reported desire and propensity to share each scenario are driven by differences in how men and women interpret the question, such a phenomenon cannot account for the pattern of results observed, namely, the interaction between gender and valence.

¹⁰ "Not sure" responses account for approximately 10% of all responses and are treated as missing values in subsequent analyses.

how much they wrote conditional on having written something in this field (*Wordcount*).¹¹

4.1.3.2. Self-perceived disclosure. Participants were asked to indicate the extent to which they believe their overall sharing behavior to be normative (*Oversharing*), using an over- vs. under-sharing scale from 0 (*I don't share thoughts and feelings when I should*) to 10 (*I share thoughts and feelings when I probably should not*), with 5 corresponding to “*I share thoughts and feelings an appropriate amount.*”

4.2. Results

Given our expectation of gender differences based on the results from Study 1, all statistical comparisons below rely on one-tailed rather than two-tailed tests.

4.2.1. Desire to disclose and actual disclosure

We observe a main effect of gender for both primary self-report measures (i.e., *DTD* and *Disclosed*). Averaging observations for each individual across scenarios and again across participants, we find that male participants experienced a weaker *DTD* than female participants, Male: $M = 1.03$, $SD = 1.30$; Female: $M = 1.52$, $SD = 1.34$; $t(545) = 4.40$, $p < .001$, $d = .38$, and men reported actually disclosing 68% of experiences ($SD = .26$), whereas women reported sharing 77% of experiences ($SD = .23$), $t(542) = 4.22$, $p < .001$, $d = .36$. The results from our secondary measures reveal a similar pattern: Significantly fewer male than female participants actually disclosed the details of a given experience in the study context (*Described*), 22% ($SD = .31$) vs. 30% ($SD = .36$), $t(545) = 2.89$, $p = .002$, $d = .25$, and conditional on writing something, male participants wrote approximately 10 fewer words than female participants, 26.7 ($SD = 24.43$) vs. 36.16 ($SD = 27.77$), $t(256) = 2.84$, $p = .002$, $d = .36$.¹²

Fig. 2 presents both the mean *DTD* ratings (left panel) and portion of scenarios reportedly disclosed (right panel) by male and female participants, broken out by valence. Both male and female participants reported a weaker desire to disclose negative than positive information, but this difference among men was nearly double that of women, Difference in mean *DTD* for positive vs. negative scenarios: Men = .80, $t(501) = 4.87$, $p < .001$, $d = .44$; Women = .45, $t(549) = 2.96$, $p = .002$, $d = .26$. This pattern is even more pronounced for actual disclosure: Women were reportedly equally likely to disclose positive and negative information, $t(531) = .03$, $p = .488$, $d = .00$, whereas there is an 8 percentage-point difference in male participants' likelihood to share negative vs. positive information, $t(487) = 2.58$, $p = .005$, $d = .24$. A similar pattern emerges for our secondary measures (see Appendix Table A.4), and the pattern holds when the analysis is conducted at the observation level (i.e., without averaging responses within participants across domains, see Appendix Table A.5). Together these results are suggestive of a possible interaction between gender and valence.

To test this possibility and better understand the role of valence in determining desired and actual disclosure, in Table 3 we regress *DTD* and *Disclosed* on *Negative* and *Male* – binary variables equal to 1 for

¹¹ These measures are treated as secondary as they capture only participants' willingness to disclose in the very specific context of this study, and *Wordcount* may reflect gender differences in the language used by men and women rather than disclosure depth.

¹² Note that the direction and significance of all comparisons hold if we take the natural log of *Wordcount*, $t(256) = 3.94$, $p < .001$, $d = .50$, and if we treat each observation as independent, *DTD*: $M = 1.03$ ($SD = 2.47$) vs. $M = 1.52$ ($SD = 2.43$), $t(2653) = 5.14$, $p < .001$, $d = .20$; *Disclosed*: 69% vs. 77%, $\chi^2(1, N = 2378) = 22.23$, $p < .001$, $\phi = .10$; *Described*: 22% vs. 30%, $\chi^2(1, N = 2654) = 24.42$, $p < .001$, $\phi = .10$; *Wordcount*: 28.07 ($SD = 28.12$) vs. 39.75 ($SD = 35.59$), $t(691) = 4.57$, $p < .001$, $d = .36$ (natural log of *Wordcount*: $t(691) = 5.74$, $p < .001$, $d = .45$).

negative scenario versions and male participants, respectively, 0 otherwise – and their interaction, *Negative X Male*. We include scenario fixed effects in all models and cluster standard errors at the participant level.¹³ Given the statistical gender differences in several demographic measures (see Appendix Table A.2), all models also control for: age (continuous variable), marital status (1 if married or in a committed relationship, 0 otherwise), and employment status (1 if employed full- or part-time, 0 otherwise).

Model 1 predicts *DTD* based only on the scenario dummies and demographic controls. Model 2 introduces the dummy variables for gender and valence, both of which are highly significant. Specifically, men's *DTD* ratings were half a point lower, on average, relative to women. This effect is robust to the inclusion of the valence dummy, revealing that *DTD* is overall lower for negative compared to positive information. Model 3 includes the interaction term, which is marginally significant, suggesting *DTD* for positive and negative information varies by gender: Men expressed a lower desire to disclose negative information than women. The remaining three models regress *Disclosed* (1 if a participant reportedly shared his or her experience with others prior to taking the survey, 0 otherwise) on the same variables just discussed using logistic regressions, wherein coefficients represent odds ratios. We again see in Model 5 that negative information diminishes the likelihood of disclosure overall, and male participants are less prone to disclose relative to female participants. Model 6 reveals a more pronounced interaction effect than what was observed in Model 3: Here the inclusion of *Negative X Male* renders both its component variables not significant, suggesting the observed gender differences in actual (self-reported) disclosure is driven exclusively by the differential likelihood to share negative as opposed to positive information.

It is worth noting, however, that this pattern does not hold when we regress our secondary outcome measures – i.e., *Described* and *Wordcount* – on the same regressors (see Appendix Table A.6). In both cases, the interaction term is not significant, and the role of valence in predicting these measures is inconsistent with the pattern observed for the primary measures. (See Footnote 12 for a discussion of the limitations of these measures.)

4.2.2. Self-perceived disclosure

The distribution of responses to our *Oversharing* measure appears in Fig. 3 below. The broad distribution of responses for both sets of bars indicates that a sizeable fraction of both genders felt that they do not share appropriately, due either to under- or over-sharing. While the modal response for women was to feel that they share an appropriate amount, the modal response for men was below the midpoint at a value of 3. The average female respondent fell marginally above perfect calibration in her level of disclosure, with a mean rating of 5.17 ($SD = 1.88$; difference from 5: $t(286) = 1.51$, $p = .066$), significantly higher than the average male rating of 4.24 ($SD = 1.79$), $t(545) = 5.91$, $p < .001$, $d = .51$, which was significantly below perfect calibration (difference from 5: $t(259) = -6.85$, $p < .001$). This indicates that, on average, men perceived themselves as being too reserved and disclosing less than optimally.

5. Study 3: Replicating the relationship between disclosure and valence

Study 3 has two aims. First, we seek to replicate the main finding from Studies 1 and 2 – i.e., the interaction between gender and valence on self-disclosure – in a preregistered study. To do so, we adopt a subset of scenarios and a paradigm similar to Study 2, in which desire and propensity to disclose were measured quantitatively and valence manipulated experimentally. Furthermore, we test the possibility that this interaction varies depending on whether the information is about oneself or about others (i.e., self-relevance). Based on earlier results, we

¹³ There is an average of 5 observations for each participant (see Footnote 9).

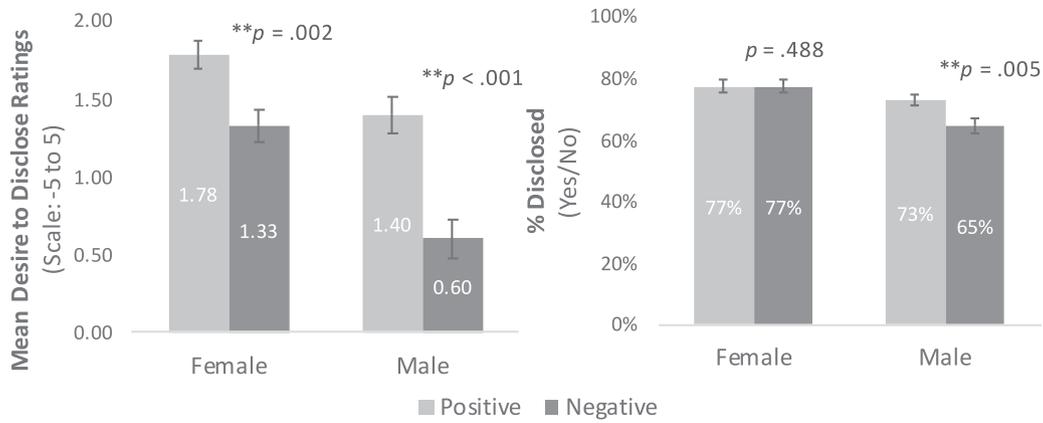


Fig. 2. Self-reported DTD ratings and actual disclosure by gender and valence (Study 2). Bars represent \pm SEs. Comparisons based on two-sample *t*-test of average participant values across scenarios.

Table 3
Regression results for determinants of desire and decision to disclose (Study 2).

VARIABLES	(1) <i>DTD</i>	(2) <i>DTD</i>	(3) <i>DTD</i>	(4) <i>Disclosed</i>	(5) <i>Disclosed</i>	(6) <i>Disclosed</i>
Male		-0.49** (0.11)	-0.32* (0.14)		0.60** (0.07)	0.81 (0.14)
Negative		-0.56** (0.10)	-0.40** (0.14)		0.75* (0.08)	0.99 (0.16)
Negative X Male			-0.32 [†] (0.19)			0.59* (0.13)
Constant	1.87** (0.36)	2.38** (0.32)	2.29** (0.32)	5.07** (1.82)	14.28** (5.20)	12.16** (4.49)
Observations	2645	2532	2532	2370	2275	2275
Adjusted [Pseudo] R ²	0.115	0.140	0.141	[0.164]	[0.180]	[0.182]

Note: Table presents unstandardized regression coefficients. Robust standard errors, clustered at the participant level, appear in parentheses. ** $p < .01$, * $p < .05$, [†] $p < .10$. All models include scenario fixed effects and demographic controls. Models 1–3: OLS regressions; Models 4–6: Logistic regressions, coefficients as odds ratios, *z*-scores for odds ratio (OR) values calculated as follows: $\ln(\text{OR})^* \text{OR} / \text{SE}$.

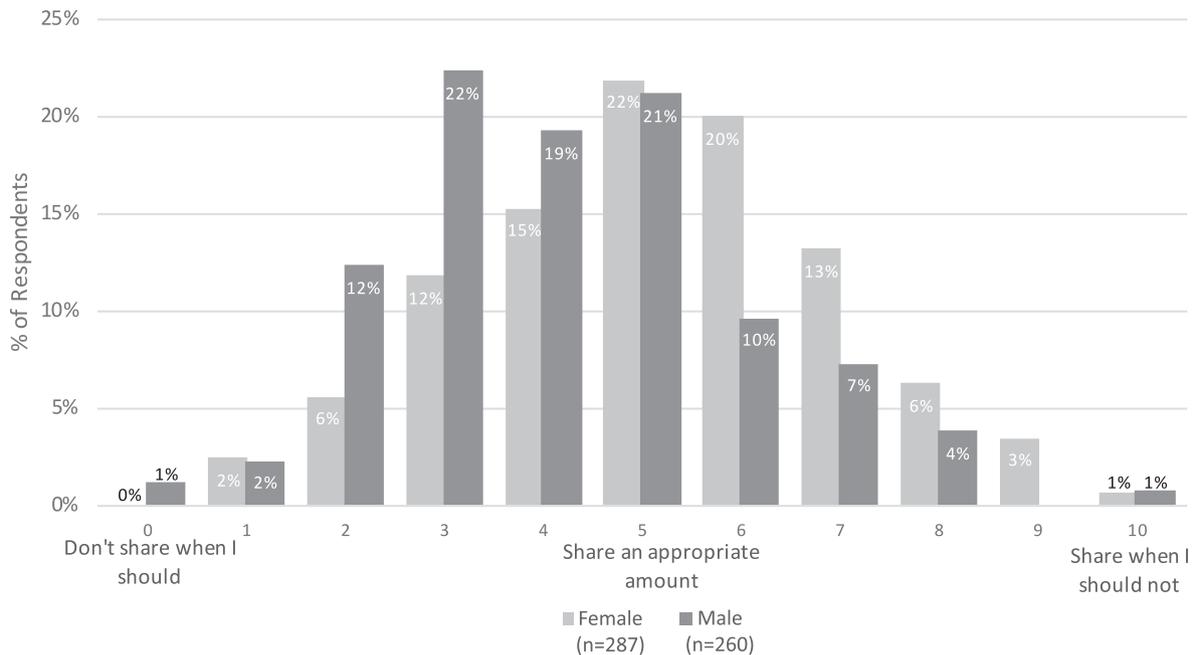


Fig. 3. Reported self-perceptions in terms of general under- vs. over-sharing. Graph presents the distributions (by gender) for responses to the following question: “Where do you fall on the scale below, where 0 is ‘Don't share thoughts and feelings when I probably should,’ and a 10 is ‘Share thoughts and feelings when I probably should not?’”

Table 4
OLS Regression results for role of self-relevance on desire to disclose.

VARIABLES	(1)	(2)	(3)	(4)	(5)
	<i>DTD</i>	<i>DTD</i>	<i>DTD</i>	<i>DTD</i>	<i>DTD</i>
<i>Male</i>	-0.10 [†] (0.15)	-0.11 (0.15)	-0.03 (0.17)	-0.11 (0.15)	-0.03 (0.17)
<i>Negative</i>	-0.24* (0.14)	-0.24 [†] (0.14)	-0.24 [†] (0.14)	-0.03 (0.16)	-0.03 (0.16)
<i>Negative X Male</i>	-0.56** (0.19)	-0.56** (0.19)	-0.56** (0.19)	-0.56** (0.19)	-0.56** (0.19)
<i>Self</i>		0.17* (0.09)	0.25 [†] (0.14)	0.39** (0.10)	0.47** (0.15)
<i>Male X Self</i>			-0.14 (0.18)		-0.15 (0.18)
<i>Negative X Self</i>				-0.44** (0.16)	-0.44** (0.16)
Constant	4.27** (0.19)	4.17** (0.20)	4.14** (0.21)	4.06** (0.20)	4.02** (0.21)
Observations	1592	1592	1592	1592	1592
Scenario Controls	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y
Participant-Clustered SE	Y	Y	Y	Y	Y
Adjusted R ²	0.034	0.035	0.035	0.038	0.038

Note: Table presents unstandardized regression coefficients. Robust standard errors, clustered at the participant level, in parentheses. ** $p < .01$, * $p < .05$, [†] $p < .10$. All models include scenario fixed effects and demographic controls.

predicted that men would be less interested in disclosing, and less likely to disclose, negative information than women, whereas no such gender differences were expected for positive information.

5.1. Materials and methods

5.1.1. Participants

As in the prior two studies, participants were recruited from a panel of alumni from a private university in the American northeast (who had not been invited to complete either Study 1 or 2), along with any family and friends with whom these alumni shared the survey link. Only two participants, who selected “Other” as their gender, were excluded from analysis, leaving a total of 405 participants (188 females, 217 males, age: $M = 48.61$ years, $SD = 16.33$; see Appendix Table A.7 for complete demographic information). Because Study 3 represents a replication of Study 2, we based our sample size calculation on the results of Study 2 for the negative versions of the four scenarios adapted for the present study. We thus assumed an effect size of $d = .28$ (group difference = .70; group $SD = 2.50$), power = .80, and alpha = .05. STATA’s PSS calculated the necessary sample size to power a two-sample t -test of mean ratings to be $N = 202$ per group (Male, Female). No additional sampling took place after results were observed. This sample size provided 80% power to detect an effect size of $d = .25$ or greater in an independent-samples t -test of our primary outcome variable (*DTD*) with a 5% false-positive rate.

5.1.2. Procedure

Interested participants accessed a Qualtrics survey and were asked whether or not they had ever experienced a series of scenarios, which were presented in random order with valence (positive vs. negative) randomized. In order to capture a range of experiences, these scenarios varied in terms of domain (work, family, relationship, health) and self-relevance, that is, whether the experience had happened directly to them or to someone else (self vs. other). Participants were presented with scenarios until they responded affirmatively to having had, for as diverse a set of domains as possible, each of the following experience

types: positive self-relevant, negative self-relevant, positive other-relevant, and negative other-relevant. When they did report having had an experience, participants were asked a series of follow-up questions about the experience (see *Measures* section).¹⁴ This design allowed us to manipulate valence both between subjects (within a domain) and within-subjects (across domains). The specific scenarios, as well as the sample sizes per cell, are presented in Appendix Table A.8, Panels A and B, respectively. The median time taken to complete the survey was approximately 7 min. This study was preregistered and the preregistration plan is available at: https://osf.io/gtmnp/?view_only=ca5ff781c6c64db58da5eebfed49e49d. In this study, we report all measures, manipulations, and exclusions.

5.1.3. Measures

5.1.3.1. Desire to disclose and actual disclosure. We measured participant *DTD* with a slightly modified version of the measure used in Study 2. Specifically, for each scenario, participants reported the extent to which they felt a desire to tell someone else about this experience using a scale from 1 (“No Desire to Share”) to 7 (“Intense, Overwhelming Desire to Share”). This is in contrast to the 10-point bipolar scale employed in Study 2, which focused on self-relevant information and experiences. We also asked participants to indicate whether they ultimately disclosed the experience to others (*Disclosed*; Yes/No/Not sure).¹⁵

5.2. Results

The results from Study 3, presented in Table 4, confirm the relationship between gender and valence observed in the earlier studies. Model 1 replicates the pattern found in Model 3 (Table 3) above, and includes scenario dummies and demographic controls (in this case, age), dummies for gender and valence – *Male* (1 if male, 0 if female), *Negative* (1 if scenario is negative, 0 if positive) – and their interaction, *Negative X Male*. The coefficients of all terms are negative and (at least marginally) significant, confirming the earlier finding that participants are overall less interested in sharing negative information with others, and that this effect is driven in large part by men who shy away from sharing negative information relative to women.

The remaining models test the impact that the self-relevance manipulation has on *DTD* across gender. In Model 2, we include the variable *Self*, which assumes a value of 1 if the scenario is about oneself (0 otherwise), followed by interaction terms to capture whether the effect of self-relevance varies depending on the information valence (*Negative X Self*, Model 3) or on gender (*Male X Self*, Model 4). We see that self-relevance has a consistent effect across all four models: Participants range from marginally (Models 2 and 3) to substantially (Models 4 and 5) more interested in disclosing self-relevant information than information about others. The magnitude and significance of this effect increases in the final two models when we include the interaction term *Negative X Self*, the coefficient of which suggests that, across the board, participants experience a lower desire to share negative information about themselves. Importantly, the gender effect for information valence, whereby men have a lower desire to disclose negative information than women, holds regardless of who the information is about, as evidenced by the fact that the *Negative X Male* term remains significant across all models but the *Male X Self* interaction fails to achieve significance. This pattern also holds when we take actual disclosure (*Disclosed*) as the outcome variable (see Appendix Table A.9), although the *Negative X Male* term is only marginally significant in the logistic regression models.

¹⁴ Participants were asked about experiencing an average of 5 ($M = 5.15$, $SD = 1.45$) scenarios and answered follow-up questions for an average of 4 ($M = 3.93$, $SD = .26$) scenarios.

¹⁵ “Not sure” responses (6% of total) were coded as missing values and excluded from analysis.

6. Discussion

The present paper extends existing research on gendered disclosure by documenting gender differences not only on established measures of the propensity to disclose, but also on new measures related to the psychological desire to share information with others. Men were less likely than women to recall a situation in which they were dying to share information with another person (Study 1), reported lower levels of a desire to disclose across a wide range of experiences (Studies 2, 3), and were, across all studies, less likely to engage in actual disclosure. Importantly, this was driven in large part by information valence: Male participants were less eager (according to both the free-recall exercise and Likert scale ratings) and likely (according to self-reported accounts) to disclose negative information compared to women, whereas no gender differences were observed for positive information.

We also found that women reported greater satisfaction than men with their own level of disclosure. Most male participants reported a greater propensity to withhold information about their thoughts and feelings than what they considered appropriate, compared to female participants, whose responses were more normally distributed around a disclosure amount perceived as appropriate. These results might be related to the Study 1 finding that significantly more male than female participants were motivated by self-presentational concerns (i.e., influencing how others see them, receiving validation or praise, reinforcing one's own self-image), which is in turn consistent with a sex-role account of disclosure (see *Literature Review*). Thus, the motive to self-enhance may be what keeps men from wanting to disclose, and from ultimately disclosing, their negative experiences to others. Women, on the other hand, were reportedly driven to disclose information in an attempt to seek comfort, which may also account for the gender differences observed for negative information: It may bring more comfort to share negative, rather than positive, information (Alicke et al., 1992; Buechel & Berger, 2012; Rimé, 2009). According to this account, the costs associated with disclosures that are misaligned with the prescriptions associated with one's gender play a role in determining disclosing behavior. It is worth noting that, although not the focus of the current paper, other costs – for instance, discomfort with emotional vulnerability or fear of negative evaluation (e.g., Watson & Friend, 1969) – might also factor into disclosure decision making.

The findings from earlier research most closely related to the current work are largely consistent with our results. For instance, Balswick and Avertt (1977) observed lower disclosure among men for emotion categories that are either unambiguously negative (hate, sadness) or perhaps can, at times, be negative (love) but no difference for happiness. Similarly, male participants in Snell et al. (1988) were less willing than women to share feelings of depression, anxiety, anger, and fear. Taken together, these findings offer support for an interaction in disclosure between gender and valence and suggest that men and women may have different motives for disclosing – perhaps due to socialization – which manifests in a tendency for men to be reluctant to share negatively-valenced information. Such an empirical result is pragmatically important, as it implies that men may be missing out on the psychological benefits of disclosing negative information. But it also has important implications for research: The possibility that existing studies may differ in the extent to which they (over)represent negative disclosures could explain conflicting results in the literature. For instance, Consedine et al. (2007) employed a research design similar to that employed in Study 2 above, with the aim of representing a broad range of disclosure domains; however, experiences in all domains were negative (e.g., shameful events, traumas, etc.). That the study found a main effect of gender (i.e., men shared less than women)

might well be attributed to this valence imbalance.

The present paper explored the role of valence in determining disclosure along gender lines and tested whether this was further moderated by self-relevance in Study 3. In additional analyses not reported in the paper, we tested for a range of secondary moderators, including age, ethnicity, and self-esteem. Gender differences do appear to attenuate with age (see Fig. S.1 in the *Supplementary Materials*) whereas ethnicity and self-esteem do not moderate the relationship between disclosure and gender. There are, however, undoubtedly other important factors that may influence gendered disclosure. In particular, the influence of communication medium (e.g., face-to-face interaction vs. digital communication) has been explored extensively in the literature (e.g., Kim & Dindia, 2011), and some research suggests that gender may interact with medium (Nosko et al., 2013). For example, a study exploring the perceived appropriateness of expressing emotions on social media found gender differences for the expression of *positive* rather than negative emotions (Waterloo, Baumgartner, Peter, & Valkenburg, 2018). Thus, the interaction between medium and disclosing behavior remains an empirical question, one that is a particularly promising avenue for future research given that the Internet offers a source of naturalistic (rather than experimental) observational field data on actual disclosure without the possibly artifactual constraints as discussed above.

This last point highlights an important limitation of the present research. Retrospective self-reports are often unreliable due to memory biases, which, in this case, might render positive events to be more enduring (the fading affect bias¹⁶) and skew recall or retrospective ratings of previously shared (e.g., Craik & Watkins, 1973), recent, or especially memorable experiences. While we see no reason that such biases should impact one gender more than the other, it is possible that the self-reports themselves reflect lay-beliefs and the stereotypes held by participants rather than participants' actual behavior (Brody & Hall, 2008). Additionally, the studies employ a panel of university alumni who expressed interest in research opportunities and participated in the absence of monetary compensation. Such a sample is likely above-average in terms of socioeconomic status, education, and perhaps willingness to disclose (by virtue of their ready willingness to participate in non-paid survey research). However, we see no reason to suspect that such factors would interact with gender and thus they cannot account for the observed gender differences.

The current research supports some of the stereotypes about men and women (Holmes, 1998). According to our findings, women share more generally than men, and experience a more intense desire to do so. However, men and women are relatively similar when it comes to sharing positive information, but men are less likely, and have a lower desire, to share negative information. Disclosure is increasingly prevalent in the Internet age, and gender remains an important fault line when it comes to patterns both of the desire to disclose and of actual disclosure.

Open practices

All studies in this article earned Open Materials and Open Data badges for transparent practices. Study 3 additionally earned the Pre-registered badge. All survey material, data, and code behind the analyses presented herein have been made publicly available at Open Science Framework (OSF) and can be accessed at https://osf.io/gtmnp/?view_only=ca5ff781c6c64db58da5eebfed49e49d. The preregistration for Study 3 is available at <https://aspredicted.org/z5xz9.pdf>.

¹⁶ For instance, Walker, Vogl, and Thompson (1997) found slightly better recall for pleasant (vs. unpleasant) events at 3-month, 1-year, and 4.5-year intervals.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

All data are available in a repository, a link to which is provided in the manuscript.

Appendix

Table A.1
Study 1 demographics by gender.

	Total (n = 195)	Female (n = 98)	Male (n = 95)	Significance
Age				
18–24	2.1%	3.1%	1.1%	$\chi^2(3) = 12.83,$ $p = .005$
25–44	35.2%	45.9%	24.2%	
45–64	37.8%	33.7%	42.1%	
65+	24.9%	17.3%	32.6%	
Ethnicity		(n = 95)	(n = 92)	
Caucasian	83.9%	79.6%	88.4%	$\chi^2(6) = 4.30,$ $p = .636$
Asian	6.7%	9.2%	4.2%	
Black	2.6%	3.1%	2.1%	
Hispanic	2.1%	3.1%	1.1%	
Mixed	1.0%	1.0%	1.1%	
Other	0.5%	1.0%	0.0%	
Prefer not to answer	3.1%	3.1%	3.2%	

Note: Significant *p*-values appear in bold.

Table A.2
Study 2 demographics by gender.

	Total (N = 547)	Female (n = 287)	Male (n = 260)	Significance
Age				
Mean	49.54	47.26	52.06	$t(545) = -3.69,$ $p < .001$
18–34	20.8%	25.4%	15.8%	$\chi^2(3) = 10.65,$ $p = .014$
35–50	33.6%	34.5%	32.7%	
51–64	24.7%	22.6%	26.9%	
65 or older	20.8%	17.4%	24.6%	
Employment				
Employed full-time	67.0%	66.0%	68.1%	$\chi^2(7) = 15.69,$ $p = .028$
Retired	17.2%	13.7%	21.2%	
Employed part-time	7.5%	8.8%	6.2%	
Unemployed, looking for work	2.8%	3.5%	1.9%	
Unemployed, not looking for work	2.4%	3.5%	1.2%	
Student	2.2%	2.8%	1.5%	
Disabled	0.2%	0.4%	0.0%	
Prefer not to answer	0.7%	1.4%	0.0%	
Marital Status				
Married	66.5%	61.3%	72.3%	$\chi^2(6) = 11.19,$ $p = .083$
Single/never married	13.5%	16.0%	10.8%	
Partner/committed relationship	10.8%	12.2%	9.2%	
Divorced	6.0%	6.6%	5.4%	
Separated	1.6%	1.4%	1.9%	
Widowed	0.9%	1.4%	0.4%	
Prefer not to answer	0.5%	1.0%	0.0%	
Ethnicity				
Caucasian	79.9%	78.7%	81.2%	$\chi^2(5) = 3.39,$ $p = .640$
Asian	9.9%	10.1%	9.6%	
Black	2.6%	3.5%	1.5%	
Hispanic	2.6%	2.4%	2.7%	
Other	3.8%	3.5%	4.2%	
Prefer not to answer	1.3%	1.7%	0.8%	
Education				
High school graduate	0.2%	0.3%	0.0%	$\chi^2(5) = 5.09,$ $p = .405$
Associate's degree	0.5%	0.7%	0.4%	
Some college	2.9%	2.1%	3.8%	
Bachelor's degree	17.6%	19.9%	15.0%	
Master's degree	57.4%	57.1%	57.7%	
Doctoral/professional degree	21.4%	19.9%	23.1%	

Note: Significant *p*-values appear in bold. Regression analyses include controls for any demographics in which a gender disparity is observed.

Table A.3
Study stimuli and sample size per condition (Study 2).

Panel A. List of Study 2 scenarios	
Scenario Title	Full Scenario
Self-Belief	Have you ever received feedback that <u>reaffirms/makes you question</u> something that you have always taken pride in believing about yourself?
Self-Discovery	Have you ever <u>discovered a new talent/identified a bad habit</u> and taken steps to <u>foster/change</u> it?
Election	Have you ever felt <u>comforted/uncomfortable</u> to learn after an election that <u>most/few</u> of the people with whom you socialize voted for the same candidate as you?
Moral Decision	Have you ever felt <u>proud/ashamed</u> about a decision you made that was morally <u>admirable/questionable</u> ?
Promotion	Have you ever felt <u>jealous of/happy for</u> a colleague who received a <u>well-deserved</u> promotion?
Performance Review	Have you ever received strong <u>praise/criticism</u> from a boss regarding your work performance?
Finances	Have you ever experienced a change in your financial situation that filled you with extreme <u>anxiety/satisfaction</u> ?
Family News	Have you and your family ever been caught up in a <u>“family drama”/excitement</u> regarding the <u>troubles/successes</u> of a loved one?
Offhand Comment	Have you ever made an offhand comment that a group of your friends found highly <u>off-putting/entertaining</u> ?
Mutual Friend	Have you ever heard through a mutual acquaintance that a close friend said something <u>complimentary/hurtful</u> about you?
Encounter with Stranger	Have you ever had a <u>pleasant (and somewhat flirtatious)/unpleasant (and somewhat demoralizing)</u> encounter with an attractive stranger?
Health Change	Has your health ever taken a notable turn for the <u>better (e.g., weight loss, overcoming a health scare)/worse (e.g., weight gain, unfavorable diagnosis)</u> ?
Juicy Gossip	In a fit of <u>excitement/anger</u> , has a casual acquaintance ever shared with you “juicy” information but asked you to keep it a secret?
Customer Service	Have you ever been <u>infuriated/impressed</u> by the treatment you received from a customer service representative?
News Story	Think of the last time you heard a very <u>interesting/disturbing</u> story on the news.
Evening with Significant Other	Think of the most <u>romantic evening you have spent/upsetting argument you have had</u> with a significant other.
Childhood Memory	Think about your <u>fondest/most painful</u> memory from your childhood.

Note: Underlined text highlights the language that was used to manipulate valence between subjects.

Panel B. Sample size per cell			
Scenario Title	Total	Positive	Negative
Self-Belief	218	53	165
Self-Discovery	183	132	51
Election	333	163	170
Moral Decision	235	79	156
Promotion	220	56	164
Performance Review	248	79	169
Finances	291	110	181
Family News	269	106	163
Offhand Comment	219	52	167
Mutual Friend	272	99	173
Encounter with Stranger	226	54	172
Health Change	314	158	156
Juicy Gossip	270	123	147
Customer Service	168	73	95
News Story	125	52	73
Evening with Significant Other	121	68	53
Childhood Memory	116	49	67

Table A.4
Study 2 statistics for secondary measures (individual level).

	Female	Male	Difference	Significance
<i>Described</i> (1/0)	Positive			
<i>N</i>	268	252		
<i>Mean</i>	29%	22%	0.07	$t(518) = 1.94, p = .026$
<i>SD</i>	0.40	0.37		
	Negative			
<i>N</i>	283	251		
<i>Mean</i>	0.32	0.23	0.09	$t(532) = 2.84, p = .002$
<i>SD</i>	0.40	0.36		

(continued on next page)

Table A.4 (continued)

	Female	Male	Difference	Significance
<i>Wordcount</i>	Positive			
<i>N</i>	105	79		
<i>Mean</i>	32%	25%	7.17	$t(182) = 2.05, p = .021$
<i>SD</i>	25.77	20.17		
	Negative			
<i>N</i>	131	84		
<i>Mean</i>	40.55	27.20	13.35	$t(213) = 3.09, p = .001$
<i>SD</i>	32.90	27.56		

Note: Statistical comparisons based on a two-sample *t*-test. Significant *p*-values appear in bold. For ease of interpretation, results for *Wordcount* are presented, but the pattern of statistical significance is even more pronounced when analysis draws on the natural log of *Wordcount* to normalize the distribution (Positive: $t(182) = 2.56, p = .006$ vs. Negative $t(213) = 4.14, p < .001$).

Table A.5

Study 2 statistics for primary and secondary measures (observational level).

	Female	Male	Difference	Significance
<i>DTD</i> (-5 to 5)	Positive			
<i>N</i>	647	634		
<i>Mean</i>	1.75	1.34	0.41	$t(1279) = 3.35, p < .001$
<i>SD</i>	2.15	2.22		
	Negative			
<i>N</i>	752	622		
<i>Mean</i>	1.32	0.72	0.61	$t(1372) = 4.23, p < .001$
<i>SD</i>	2.64	2.66		
<i>Disclosed</i> (Yes/No)	Positive			
<i>N</i>	555	567		
% Yes	77.48%	71.78%	5.70%	$\chi^2(1, N = 1122) = 4.80, p = .028$
	Negative			
<i>N</i>	690	567		
% Yes	77.1%	65.61%	11.49%	$\chi^2(1, N = 1257) = 20.36, p < .001$
<i>Described</i> (1/0)	Positive			
<i>N</i>	647	634		
% Described	28.90%	21.29%	7.61%	$\chi^2(1, N = 1281) = 9.85, p = .002$
	Negative			
<i>N</i>	752	622		
% Described	31.12%	22.03%	9.09%	$\chi^2(1, N = 1374) = 14.27, p < .001$
<i>Wordcount</i>	Positive			
<i>N</i>	187	135		
<i>Mean</i>	34.10	25.17	8.93	$t(320) = 2.82, p = .003$
<i>SD</i>	30.02	24.95		
	Negative			
<i>N</i>	234	137		
<i>Mean</i>	44.26	30.93	13.33	$t(369) = 3.43, p < .001$
<i>SD</i>	38.96	30.75		

Note: Statistical comparisons based on a two-sample *t*-test (means) or Pearson's chi-square test (proportions). Significant *p*-values appear in bold. The pattern holds when analysis includes the natural log of *Wordcount* (Positive: $t(320) = 3.75, p < .001$ vs. Negative $t(369) = 4.18, p < .001$).

Table A.6

Regressions for secondary disclosure measures (Study 2).

VARIABLES	(1) <i>Described</i>	(2) <i>Described</i>	(3) <i>Described</i>	(4) <i>Wordcount</i>	(5) <i>Wordcount</i>	(6) <i>Wordcount</i>
<i>Male</i>		0.61** (0.10)	0.61* (0.12)		-10.86** (3.51)	-9.03* (4.25)
<i>Negative</i>		1.07 (0.10)	1.06 (0.14)		6.64* (2.74)	7.99* (3.85)
<i>Negative X Male</i>			1.01 (0.19)			-3.40 (5.22)
Constant	0.19** (0.08)	0.43* (0.18)	0.44 (0.19)	25.71** (8.86)	38.54** (8.76)	37.69** (8.80)
Observations	2645	2532	2532	692	675	675
Adj [Pseudo] R ²	[0.036]	[0.043]	[0.043]	0.024	0.056	0.055

Note: Table presents unstandardized regression coefficients. Robust standard errors, clustered at the participant level, appear in parentheses. ** $p < .01$, * $p < .05$. All models include scenario fixed effects and demographic controls. Models 1–3: logistic regression, coefficients as odds ratios, *z*-scores for odds ratio (OR) values calculated as $\ln(OR) \cdot OR/SE$. Models 4–6: OLS regression. For ease of interpretation, *Wordcount* is taken as the dependent variable, and the pattern is unaltered by taking the natural log of *Wordcount* as the outcome variable.

Table A.7
Study 3 demographics by gender.

	Total (n = 405)	Female (n = 188)	Male (n = 217)	Significance
Age				
Mean	48.61	44.62	52.01	$t(403) = -4.70$, $p < .001$
18–34	28.9%	37.2%	21.7%	$\chi^2(3) = 30.58$, $p < .001$
35–50	25.7%	25.5%	25.8%	
51–64	25.4%	28.2%	23.0%	
65 or older	20.0%	9.0%	29.5%	

Note: Statistical comparisons based on a two-sample *t*-test (mean age) and Pearson's chi-square test (age category). Significant *p*-values appear in bold.

Table A.8
Study stimuli and sample size per condition (Study 3).

Panel A. List of Study 3 scenarios		
Scenario Title	Full Scenario	
Work	<i>[Have you/Has a colleague] ever received strong [criticism/praise] from a boss regarding [your/his or her] work performance?</i>	
Family	<i>[Have you and your family/Has someone you know] ever been caught up in [a "family drama"/<u>excitement</u>] regarding the [troubles/successes] of a family member?</i>	
Identity	<i>[Have you/Has someone you know] ever done something that [<u>made you question/reaffirmed</u>] a [belief you took pride in holding/positive belief you held] about [yourself/them]?</i>	
Health	<i>Has [your health/the health of someone you know] ever taken a notable turn for the [<u>better (e.g., weight loss, overcoming a health scare)/worse (e.g., weight gain, unfavorable diagnosis)</u>]?</i>	
Note: Italicized and underlined text highlights the language that varied between subjects to manipulate self-relevance and valence, respectively.		
Panel B. Sample size per cell		
Domain	Negative	Positive
Work	210	173
Family	201	233
Identity	235	194
Health	155	191
Total	801	791

Table A.9
Logistic regression results for role of self-relevance on decision to disclose.

VARIABLES	(1) <i>Disclosed</i>	(2) <i>Disclosed</i>	(3) <i>Disclosed</i>	(4) <i>Disclosed</i>	(5) <i>Disclosed</i>
<i>Male</i>	0.69 [†] (0.14)	0.69 [†] (0.14)	0.71 (0.17)	0.69 [†] (0.14)	0.70 (0.16)
<i>Negative</i>	1.01 (0.22)	1.02 (0.22)	1.02 (0.22)	1.20 (0.29)	1.19 (0.29)
<i>Negative X Male</i>	0.62 [†] (0.16)	0.62 [†] (0.17)	0.62 [†] (0.17)	0.62 [†] (0.17)	0.62 [†] (0.17)
<i>Self</i>		1.76** (0.22)	1.83** (0.38)	2.15** (0.38)	2.22** (0.53)
<i>Male X Self</i>			0.93 (0.24)		0.95 (0.24)
<i>Negative X Self</i>				0.69 (0.16)	0.69 (0.16)
Constant	1.81* (0.42)	1.32 (0.32)	1.30 (0.33)	1.21 (0.30)	1.20 (0.31)
Observations	1493	1493	1493	1493	1493
Pseudo R ²	0.039	0.051	0.051	0.053	0.053

Note: Table presents unstandardized regression coefficients. Robust standard errors, clustered at the participant level, in parentheses. Coefficients represent odds ratios and z-scores for odds ratio (OR) values are calculated as follows: $\ln(\text{OR})/\text{SE}$. ** $p < .01$, * $p < .05$, [†] $p < .10$. All models include scenario fixed effects and demographic controls.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jesp.2023.104525>.

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