

Motivated Secrecy: Politics, Relationships, and Regrets

Rachel I. McDonald
Columbia University

Jessica M. Salerno
Arizona State University

Katharine H. Greenaway
University of Melbourne

Michael L. Slepian
Columbia University

Recent work has explored the dynamics of secrecy and its outcomes, but has yet to examine the motivations people have for engaging in secrecy and how such motivations shape the experience of secrecy and its implications. We present a motivational model of secrecy, and test this model in diverse contexts: (a) politics (secret votes in the 2016 United States election), (b) common secrets people keep, and (c) romantic relationships (secrets from partners) across a large sample of participants (total $N = 1,839$). We explored the motivations people have for keeping a secret, and the psychological implications of having a secret for one's self and relationships. We found that mind wandering to secrets (but not concealing secrets) was associated with feelings of inauthenticity and regret. Moreover, it was secrecy motivated by concern for one's reputation rather than one's relationships that predicted these harms of secrecy.

Keywords: secrecy, concealment, mind-wandering, motivation, politics

Supplemental materials: <http://dx.doi.org/10.1037/mot0000139.supp>

Social motivations guide the way we act around others. For instance, a social motive for affiliation promotes spending time with friends (Neel, Kenrick, White, & Neuberg, 2016). These social motives allow us to connect to others, and such connection and communication brings practical benefits in the form of sharing resources and information (Greenaway, Wright, Willingham, Reynolds, & Haslam, 2015; see also Cornwell, Franks, & Higgins, 2017). How people might pursue social motives by *not* communicating with others (i.e., keeping secrets), however, is understudied.

Research on secrecy has been surprisingly scarce. Initial models predicted that secrecy is harmful because active concealment within conversations is fatiguing (e.g., Lane & Wegner, 1995; Pennebaker, 1997). Renewed interest and recent refinement in the understanding of secrecy, however, reveals that although active concealment within a conversation is fatiguing (Critcher & Ferguson, 2014), it is less frequent relative to the many times secrets spontaneously come to mind when irrelevant to the task at hand

(Slepian, Chun, & Mason, 2017). People think about their secrets more frequently than they are in social interactions that necessitate actively concealing those secrets (Slepian et al., 2017; Slepian & Moulton-Tetlock, 2019). Moreover, the frequency with which people think about their secrets predicts lower individual well-being, whereas the frequency of concealing secrets does not (Slepian et al., 2017; Slepian & Moulton-Tetlock, 2019). This recent work suggests a fundamental rethinking of secrecy. The harm from having a secret may not stem from moments of concealment from others, but rather from having to live with and think about the secret (Liu & Slepian, 2018; Slepian, Halevy, & Galinsky, 2019).

What is missing from this nascent research area is an examination of the motivations that underlie secrecy, and how those motivations shape the experience and implications of secrecy. We explore this question in diverse domains ranging from politics to romantic relationships. We predicted three motivations would be particularly relevant to secrecy: concern with protecting one's reputation, ensuring social belonging, and maintaining social harmony. While these motivations were first predicted and examined in a unique context (i.e., voting secrecy; Studies 1a and 1b), our follow-up studies (Studies 2 and 3) demonstrate that the patterns of results generalize to the larger universe of secrets people keep.

We first predicted that reputational concerns might motivate secrecy. Secrets often concern information that people consider embarrassing or shameful (Hill, Thompson, Cogar, & Denman, 1993; Slepian, Kirby, & Kalokerinos, 2019), which are reputation-focused emotions. More broadly, people strategically avoid behaviors with the potential to signal membership in undesired social groups (Berger & Heath, 2008). If, for example, people view their own behavior as being associated with an undesired or stigmatized

This article was published Online First May 16, 2019.

Rachel I. McDonald, Management Division Columbia Business School, Columbia University; Jessica M. Salerno, School of Social and Behavior Sciences, Arizona State University; Katharine H. Greenaway, School of Psychological Sciences, University of Melbourne; Michael L. Slepian, Management Division Columbia Business School, Columbia University.

Correspondence concerning this article should be addressed to Michael L. Slepian, Management Division Columbia Business School, Columbia University, 3022 Broadway, New York, NY 10025. E-mail: michael.slepian@columbia.edu

identity (e.g., voting for a candidate from an opposing political party; living on food stamps; having an affair), they may be motivated to avoid making this behavior public. In other words, because concern with one's reputation is a fundamental social motive (Leary, Tambor, Terdal, & Downs, 1995), people might worry that revealing undesired behaviors could damage their reputation in their own eyes or the eyes of others.

Second, belongingness concerns might motivate secrecy. Belongingness is another salient social motive (Baumeister & Leary, 1995). People often keep secret behaviors that they see as counternormative or unusual, and one reason may be fear of ostracism that would follow from discovery of those behaviors. This fear is not unfounded; social exclusion is a common way of sanctioning people for behavior perceived as deviant (Ditrich & Sassenberg, 2016; Stamkou, van Kleef, Homan, & Galinsky, 2016). To this end, research suggests that people hide stigmatizing information to avoid social exclusion and other negative reactions (e.g., Frijns, Finkenauer, & Keijsers, 2013; Kelly, Klusas, von Weiss, & Kenny, 2001; Stutterheim et al., 2016; Vangelisti, 1994). The more people with a concealable stigmatized identity fear ostracism, the more likely they are to conceal the identity (Quinn & Chaudoir, 2009; Quinn et al., 2014; see also Quinn & Earnshaw, 2011, 2013).

Third, a desire to maintain social harmony might motivate secrecy. People might anticipate that being honest about their preferences, feelings, or behavior with a close other could cause tension if it conflicts with the other's value system (e.g., Levine & Cohen, 2018). That is, people might think they are doing the other person a service by not being forthright (Lupoli, Levine, & Greenberg, 2018). People generally seek to avoid conflict. Secret keepers might be trying to avoid the aggression (e.g., Shuntich, 1976) and unpleasantness that results from discussing topics with people who have different attitudes—particularly when those attitudes are held with moral conviction (Skitka, Bauman, & Sargis, 2005).

Given the lack of research in this area, we first conducted an exploratory test of which of these three motivations for keeping a secret (i.e., concerns about reputation, social belonging, social harmony) would predict people's experiences with secrecy (i.e., mind wandering to the secret and active concealment of the secret in social interactions). Although this part of our model was exploratory, we did make predictions with regard to the more general relationships among our variables. Specifically, we predicted that motivations (IVs) for secrecy would predict downstream negative consequences (DVs) indirectly through shaping people's experiences of secrecy (mediators: i.e., frequency of mind-wandering vs. concealing).

Based on prior work, we predicted that the impact of secrecy would be explained through mind-wandering to the secret rather than having to actively conceal the secret. Our first study (and its exact replication) found support for this general prediction, and also pointed to a specific pathway from motivated secrecy to downstream harm that we then tested in subsequent studies.

Specifically, our first studies suggested that secrets motivated by concern for one's reputation are frequently mind wandered to, and the frequency of mind wandering to a secret was associated with reduced feelings of authenticity and increased regret about the secret.

Our final study explored a link between mind-wandering to secrets and these determinantal outcomes (reduced authenticity, increased regret). Prior work finds that coping efficacy is related to

mind wandering to thoughts of a secret (Slepian & Moulton-Tetlock, 2019). Secrets motivated by reputational concerns may feel particularly challenging to cope with, and thus one's perceived ability to cope with a secret may explain a link between reputation concerns and mind wandering to the secret.

Politics: Studies 1a and 1b

We first explored motivated secrecy in a context in which a secret would be thought about and concealed frequently: a sample of participants recruited immediately after the 2016 United States presidential election who kept their vote a secret. Politics provides a rich context in which to study motivations for secrecy, as this is a domain in which people care strongly about their views and are aware of the fraught social dynamics that surround voicing those views. Specifically, given the political rhetoric surrounding the charged 2016 presidential election between Hillary Clinton and Donald Trump, it became apparent that many people were keeping secret their favored candidate—even from close others. Such a secret in the days immediately following the election results would likely be very much top-of-mind, and certainly be topical to one's conversations, and thus a secret with frequent need for concealment.

In Studies 1a and 1b we explored whether motivations for keeping one's vote secret shape the experiences people have with secrecy and the implications of that secrecy. Study 1a was an exploratory study, predicting that experience with secrecy—specifically intrapersonal experience with secrecy (i.e., mind-wandering to the secret outside of concealment contexts)—would mediate a link between motivations for secrecy and downstream harm. Study 1b then served as a confirmatory study for this proposed pathway.

Participants and Procedure

Study 1a. The night following the 2016 United States presidential election (November 9, 11 p.m. ET), we posted a study seeking 500 participants (to ensure high power) who secretly voted for someone other than whom they publicly claimed to have voted for. A sensitivity power analysis demonstrates that with 80% power and $\alpha = .05$, this sample size can detect an effect size of $r = .125$. Anticipating that unqualified participants would take part in the study, we collected data until 500 participants ($M_{\text{age}} = 33.54$ years, $SD = 10.80$; 54% male) passed both a qualification check and an honesty check (described below). Because we were interested in assessing participants' self-reported experiences of mind wandering and active concealment during the course of the day, the recruitment link was taken down every morning and reposted at 5 p.m. ET to ensure participants completed the study during the evening to late night, allowing them to report their experience from the entire day (adopting a method used in prior work; Slepian et al., 2017).

Recruitment ended on November 11 with 558 participants (58 participants failing either the qualification check, $n = 37$, or the honesty check, $n = 21$). Specifically, if participants did not report one candidate for the secret vote and a different candidate for the public claim, they failed our qualification check. And at the end of the study, participants completed an honesty check, where we asked whether they provided honest responses; compensation was

promised regardless of their answer. Those who admitted to providing dishonest responses were also excluded.

Study 1b. Following the conclusion of data collection for Study 1, on the night of November 11, 2016, we posted a study seeking another sample of 500 participants who secretly voted for someone other than whom they publicly claimed to have voted for. Participants were not allowed to take part in Study 1b if they had previously participated in Study 1a. We again collected data until 500 participants ($M_{\text{age}} = 33.58$ years, $SD = 11.13$; 56% female) passed both the qualification check (19 failed) and honesty check (30 failed), which resulted in 549 participants recruited by November 13.

Voting descriptives. We first asked whom participants voted for, and whom they publicly claimed they voted for. Of the remaining participants (after exclusions, see above) in Study 1a [and Study 1b in brackets] respectively, 27% [27%] secretly voted for Clinton, 54% [52%] secretly voted for Trump, and 19% [21%] secretly voted for someone else. Figure 1 demonstrates that the majority kept their secret from a close other (i.e., family, friend, or partner).

Motivations for secrecy. We identified three motivations for secrecy, and created a 12-item scale, seeking to capture those three motivations: (a) reputation motivation (e.g., “I don’t want to be known as someone who supports [candidate],” “Most people I know would think differently of me for supporting [candidate]”), (b) belongingness motivation (e.g., “I would be afraid certain groups I belong to [friends groups, or other organizations] would exclude me for supporting [candidate],” “I have no one to talk to about why I support [candidate]”), and (c) social-harmony motivation (e.g., “I want to avoid conflicts with people I know who support [candidate],” “It would make my relationships with people I care about hard if they knew I supported [candidate]”; see Appendix for full scale).

Experience of secrecy. On a subsequent page, participants saw the text “You voted for [candidate] but kept this secret from [target].” We asked participants in a counterbalanced order how frequently they thought about the secret that day, and how frequently they concealed the secret that day (from Slepian et al., 2017; Slepian & Moulton-Tetlock, 2019).

More specifically, to capture the intrapersonal experience of secrecy (i.e., mind wandering to secrets when not with others), we asked participants to report how many times that day they were not

with the person from whom they were keeping the secret, but found themselves spontaneously mind wandering to their secret vote.

To capture the interpersonal experience of secrecy (i.e., actively concealing when interacting with others), we asked participants to report how many times that day they were interacting with the person and had “to actively hold back your secret from them (you had to stop yourself from revealing the secret of who you voted for).”

These measures of reported mind wandering and concealment frequency have been validated in prior work (Slepian et al., 2017; Slepian & Moulton-Tetlock, 2019). Mind wandering can take many forms, and thus recent work calls for researchers to clarify what form of mind wandering is being examined (Seli et al., 2018). In the current work, we conceptualize mind wandering as a thought that is spontaneous and not relevant to the current task (i.e., here mind wandering to the secret vote when not relevant to the current context).

Participants also completed two randomly ordered Positive and Negative Affect Schedule scales (Watson, Clark, & Tellegen, 1988), measuring how they felt when (a) they spontaneously mind wandered to the secret (when not with the target person), and (b) they were interacting with the person from whom the secret was being kept and had to actively conceal the secret during the interaction. These were collected for the purpose of testing whether the hypothesized effects existed above and beyond the affective experience of concealing and mind wandering to secrets; this was the case (see the online supplemental materials for analyses).

Outcomes of voting secrecy. Participants completed measures (1 = *not at all* to 7 = *very much*) of feelings of one’s own authenticity (“I feel that I am not being fully authentic with [target]” and “I feel that I am holding back the “real me” from [target]”; Study 1a: $r = .63$; Study 1b, $r = .59$) and relational closeness (“How close do you feel to [target]?” and “How connected do you feel to [target]?”; Study 1a: $r = .86$; Study 1b, $r = .89$).

In Study 1b, we added a new measure of regret (4 items assessing regret for one’s vote; e.g., “I regret voting for [piped text: real vote], from 1 = *not at all* to 7 = *very much*, $\alpha = .89$ (see the Appendix for the full scale). To be consistent with prior work in the authenticity domain, and our subsequent studies (Studies 2 and

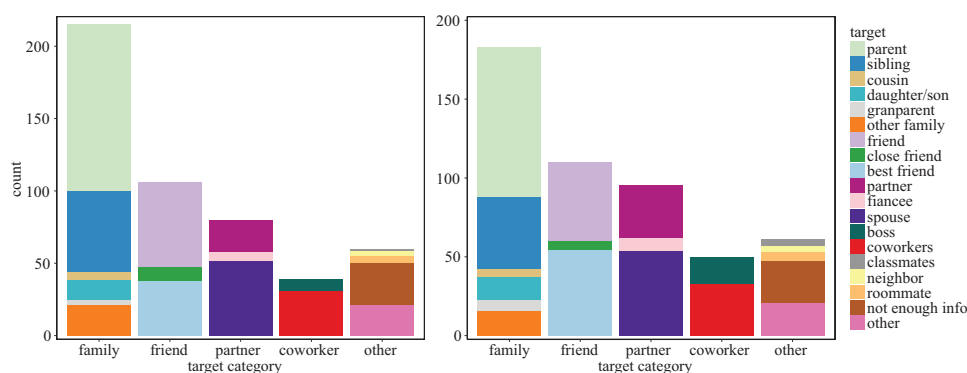


Figure 1. Study 1a (left) and Study 1b (right) frequencies of the closest target from whom the secret vote was being kept. See the online article for the color version of this figure.

Table 1
Means (on Diagonal), Standard Deviations (in Parentheses), and Bivariate Correlations Among the Variables (Study 1a)

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|----------|-------------|
| 1. Reputation | 4.66 (1.38) | .62** | .65** | .23** | .13 | -.17** | .11 | .07 | .04 | .07 |
| 2. Belonging | | 3.83 (1.55) | .50** | .19** | .18** | -.21** | .03 | -.05 | .03 | .08 |
| 3. Harmony | | | 5.07 (1.42) | .23** | .16** | -.22** | .09 | .14* | .13 | -.03 |
| 4. Mind-wandering frequency | | | | 3.26 (2.83) | .45** | -.25** | .13 | .09 | .14 | .02 |
| 5. Concealment frequency | | | | | 2.12 (2.47) | -.15* | <.01 | .02 | .10 | -.02 |
| 6. Authenticity | | | | | | 3.52 (1.64) | -.03 | -.05 | -.04 | .03 |
| 7. Relational closeness | | | | | | | 5.13 (1.48) | .08 | <.01 | .06 |
| 8. Age | | | | | | | | 33.54 (10.80) | .08 | .12 |
| 9. Gender (male = 1, female = 2) | | | | | | | | | 54% male | -.10 |
| 10. Conservatism | | | | | | | | | | 3.86 (1.57) |

Note. Correlations with gender represent point-biserial correlations.

* $p < .05$. ** $p < .01$.

3), we scored the authenticity items so that increasing values indicate increasing authenticity.

Demographics. For descriptive purposes, participants completed demographics (gender, age, native language), “To what degree would you say that you are politically engaged?” (1 = *not at all* to 7 = *very much*; $M = 4.37$, $SD = 1.58$, 95% CI [4.27, 4.47]), and “When it comes to politics, how liberal or conservative are you?” (1 = *extremely liberal* to 7 = *extremely conservative*; $M = 3.86$, $SD = 1.57$, 95% CI [3.73, 4.00]). Given the outcome of the election, it is possible that our effects are driven by a particular ideology, and thus we included the measure of conservatism in our analyses.

Results

Zero-order correlations between all variables, and their means and standard deviations, are presented in Tables 1 and 2. For all analyses, tests of multicollinearity indicated independence among the variables, all variance-inflation factors < 2.5 , and thus below the standard cutoff of 10 (Kline, 1998).

Conservatism did not correspond with any of our variables, with the exception of regret (measured in Study 1b), whereby the more conservative our participants, the less they regretted keeping their vote secret. Perhaps conservative participants were satisfied with their vote, given the outcome of the election. Reciprocally, liberal participants may have wished that they voiced their support for Clinton in advance of the election. We include conservatism as a control in our models, but note it has almost no effect in any of the analyses.

Motivations for voting secrecy. As can be seen in Tables 1 and 2, motivations for voting secrecy correlate with one another. This makes a good deal of sense when considering that each is a motivation for maintaining one’s secret. Hence, in our analyses we examine one motivation, accounting for the others, to isolate the unique relationship between each motivation and each experience with secrecy.

A factor analysis suggested an alternate aggregation of our items than the one we had theorized. We had predicted reputational concerns would primarily refer to one’s image (e.g., not wanting to be known as someone who is/does . . .). Yet, two items intended to capture aspects of belongingness and two items intended to capture social harmony actually loaded onto this reputation factor,

such that the broader (empirically derived) factor relates to people’s broader concerns with how they are viewed in others’ eyes (see the Appendix for each item). We find the same results for this factor, whether our analyses include the more narrow view of reputational concerns that we predicted, or the broader empirically derived factor.

Experiences of voting secrecy. Given that free responses of estimated frequencies of secrecy (mind wandering to secrets outside of social interactions, and actively concealing them within social interactions) are unbounded, we used the adjusted boxplot to identify outliers (as per Slepian et al., 2017; Slepian & Moulton-Tetlock, 2019), which uses a robust skewness estimator to generate representations of the data without making parametric assumptions (Hubert & Vandervieren, 2008).¹ Each participant made two frequency estimates (mind wandering and concealing); 28 of these frequency estimates (from 26 participants) were considered outliers and excluded for scoring above 16 instances in a day (only 2.80% of the data).

Replicating prior work, but here in the domain of secrets about voting, people reported mind wandering to thoughts of their secrets (Study 1a: $M = 3.26$ times in a day, $SD = 2.83$, 95% CI [3.01, 3.52]; Study 1b: $M = 2.09$, $SD = 1.70$, 95% CI [1.94, 2.25]) more than they reported actively concealing them (Study 1a: $M = 2.12$ times in a day, $SD = 2.47$, 95% CI [1.90, 2.34]; Study 1b: $M = 1.39$, $SD = 1.61$, 95% CI [1.25, 1.54]); Study 1a: $t(473) = 9.99$, $p < .00001$, $d = 0.46$, 95% CI [0.36, 0.55]; Study 1b: $t(448) = 8.91$, $p < .00001$, $d = 0.42$, 95% CI [0.32, 0.52].

Motivations for secrecy predicting secrecy experiences. Given that both mind wandering and concealing frequency should both track how significant the secret is to the participant, it is important to enter both variables to isolate the unique relationship each has with our dependent measures (Slepian et al., 2017; Slepian & Moulton-Tetlock, 2019). Thus, each analysis on an experience with secrecy (mind wandering, concealment), includes the alternate variable as a predictor, and to observe the unique effects of each motivation for voting secrecy, we entered each

¹ Standard-deviation-based exclusion is problematic because the SD used to determine the cutoff is itself biased by extreme outliers (Hubert & Vandervieren, 2008; Seo, 2006).

Table 2
Means (on Diagonal), Standard Deviations (in Parentheses), and Bivariate Correlations Among the Variables (Study 1b)

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|-----------------------------------|-------------|-------------|-------------|-------|-------------|-------------|-------|-------|---------------|------------|-------------|
| 1. Reputation | 4.59 (1.52) | .68** | .61** | .20** | .12 | -.13 | .09 | .04 | .03 | <.01 | .10 |
| 2. Belonging | 3.73 (1.49) | 3.73 (1.49) | .51** | .23** | .17** | -.08 | .09 | <.01 | .02 | <.01 | .01 |
| 3. Harmony | 4.95 (1.45) | 4.95 (1.45) | .49** | .10 | .05 | -.17** | .18** | -.06 | .08 | .12 | -.01 |
| 4. Mind-wandering frequency | | | 2.09 (1.70) | .46** | .46** | -.24** | .02 | .22** | -.04 | -.05 | -.10 |
| 5. Concealment frequency | | | 1.39 (1.61) | | 1.39 (1.61) | -.18** | .03 | .15 | .03 | .03 | .02 |
| 6. Authenticity | | | 3.78 (1.57) | | 3.78 (1.57) | -.08 | -.08 | -.08 | -.01 | <.01 | -.03 |
| 7. Relational closeness | | | 5.16 (1.55) | | 5.16 (1.55) | -.06 | -.06 | -.06 | .09 | .08 | -.07 |
| 8. Regret | | | | | | 3.07 (1.04) | | | -.05 | <.01 | -.16* |
| 9. Age | | | | | | | | | 33.58 (11.13) | .13 | .10 |
| 10. Gender (male = 1, female = 2) | | | | | | | | | | 56% female | -.04 |
| 11. Conservatism | | | | | | | | | | | 3.95 (1.58) |

Note. Correlations with gender represent point-biserial correlations.
* $p < .05$. ** $p < .01$.

motivation composite (along with political conservatism which had close to zero effect; full tables are found in the Appendix).

In both Studies 1a and 1b, across both factor breakdowns of our motivational scale (the predicted composite, and the empirically derived composite), only one reliable relationship emerged between a motivation for secrecy and one's experience with that secret.

Mind wandering. In both studies, we found that the greater one's reputational concern, the more one's mind wandered to their secret outside of social interactions [Study 1a (predicted composite: $b = 0.28$, 95% CI [0.05, 0.51], $SE = 0.12$, $t(464) = 2.37$, $p = .02$; empirically derived composite: $b = 0.38$, 95% CI [.18, .57], $SE = 0.10$, $t(464) = 3.79$, $p = .002$); Study 1b (predicted composite: $b = 0.16$, 95% CI [0.03, 0.29], $SE = 0.07$, $t(441) = 2.39$, $p = .02$); empirically derived composite: $b = 0.22$, 95% CI [.11, .32], $SE = 0.05$, $t(441) = 3.99$, $p < .001$].

Concealment. In contrast, concern with one's reputation did not predict concealment of the secret in either study [Study 1a (predicted composite: $b = -0.15$, 95% CI [-0.34, 0.04], $SE = 0.10$, $t(464) = -1.57$, $p = .12$; empirically derived composite: $b = 0.05$, 95% CI [-.12, .21], $SE = 0.08$, $t(464) = 0.58$, $p = .56$), or Study 1b (predicted composite: $b = -0.04$, 95% CI [-0.17, 0.09], $SE = 0.07$, $t(464) = -0.58$, $p = .56$; empirically derived composite: $b = 0.04$, 95% CI [-.06, .15], $SE = 0.05$, $t(441) = 0.84$, $p = .40$]. See the Appendix for the full tables.² No other motivations reliably predicted experiences with secrecy across both factor breakdowns (see the Appendix for the full tables).

Secrecy experiences predicting authenticity. Across Studies 1a and 1b, we found one reliable relationship between an experience with secrecy and downstream outcomes. Examining mind wandering to and concealment of the secret as simultaneous predictors, we found that increased mind wandering to the secret predicted reduced feelings of authenticity (Study 1a: $b = -0.13$, 95% CI [-0.19, -0.07], $SE = 0.03$, $t(471) = -4.30$, $p < .0001$; Study 1b: $b = -0.21$, 95% CI [-0.30, -0.11], $SE = 0.05$, $t(446) = -4.22$, $p < .0001$). In contrast, increased concealment of the secret did not predict feelings of authenticity (Study 1a: $b = -0.03$, 95% CI [-0.10, 0.04], $SE = 0.04$, $t(471) = -0.83$, $p = .41$; Study 1b: $b = -0.06$, 95% CI [-0.16, 0.04], $SE = 0.05$, $t(446) = -1.13$, $p = .26$; see full Tables in the Appendix).

Next, in pursuit of testing a mediational model, we examined our proposed mediators (i.e., experiences with secrecy) as a predictor of our outcomes (including the motivational variables as predictors as is required to calculate b paths in an indirect effect test). Indeed, when accounting for the motivational variables, mind wandering to the secret (but not concealment) still predicted reduced feelings of authenticity (across both breakdowns of our motivational composites; see the Appendix). Accordingly, tests of indirect effects (5,000 bootstrap samples) were thus conducted, including all three secrecy motivations as focal predictors and both

² There was one other reliable relationship in both Studies 1a and 1b. Secrecy motivated by concern for social belonging was related to increased concealment of the secret in both studies, but this was not associated with either lower authenticity or lower relational closeness. Motivation for social harmony was associated with no harmful outcomes. No other motivations reliably predicted experiences with secrecy across both factor breakdowns (see the Appendix for full reports on each variable).

experiences of secrecy (mind wandering and active concealing) as mediators.

Reputation motivation uniquely predicted lower feelings of authenticity through more frequent mind wandering to one's secret, Study 1a (predicted composite, $M_{\text{Indirect-Effect}} = -.032$, $SE = .016$, 95% CI $[-.070, -.006]$; empirically derived composite, $M_{\text{Indirect-Effect}} = -.041$, $SE = .015$, 95% CI $[-.077, -.017]$); Study 1b (predicted composite, $M_{\text{Indirect-Effect}} = -.025$, $SE = .015$, 95% CI $[-.061, -.002]$; empirically derived composite, $M_{\text{Indirect-Effect}} = -.025$, $SE = .015$, 95% CI $[-.061, -.002]$).

There was no parallel route from reputation motivation on authenticity through concealment, Study 1a (predicted composite, $M_{\text{Indirect-Effect}} = .005$, $SE = .007$, 95% CI $[-.003, .025]$; empirically derived composite, $M_{\text{Indirect-Effect}} = -.001$, $SE = .004$, 95% CI $[-.015, .003]$); Study 1b (predicted composite, $M_{\text{Indirect-Effect}} = .001$, $SE = .005$, 95% CI $[-.006, .019]$; empirically derived composite, $M_{\text{Indirect-Effect}} = .003$, $SE = .005$, 95% CI $[-.020, .002]$).

Secrecy experiences predicting regret. Also (measured only in Study 1b), we examined outcomes on feeling regret. Examining mind wandering to and concealment of the secret as simultaneous predictors, we found that that increased mind wandering to the secret predicted increased regret ($b = 0.13$, 95% CI $[0.06, 0.19]$, $SE = 0.03$, $t(446) = 3.85$, $p = .0001$), whereas increased concealment of the secret did not ($b = 0.03$, 95% CI $[-0.04, 0.10]$, $SE = 0.03$, $t(446) = 0.86$, $p = .39$).

Accordingly, reputation motivation predicted increased regret through more frequent mind wandering to one's secret (predicted composite: $M_{\text{Indirect-Effect}} = .016$, $SE = .011$, 95% CI $[-.001, .044]$; empirically derived composite: $M_{\text{Indirect-Effect}} = .025$, $SE = .011$, 95% CI $[-.008, .053]$). There was no parallel route from reputation motivation on regret through concealment (predicted composite: $M_{\text{Indirect-Effect}} = -.001$, $SE = .004$, 95% CI $[-.014, .004]$; empirically derived composite: $M_{\text{Indirect-Effect}} = .002$, $SE = .004$, 95% CI $[-.002, .018]$).

Discussion

Study 1a found that the extent to which people were concerned with their reputation, they more frequently mind wandered to thoughts of their secret outside concealment contexts, which, in turn, predicted reduced feelings of authenticity. Thus, being worried about what others think about one's self may lead to repetitive thoughts on this topic (Mellings & Alden, 2000). These effects were replicated in Study 1b, and also found to extend to another outcome: feelings of regret.

Study 2: Common Secrets

The findings of Studies 1a and 1b help to highlight the nature of the harm of secrecy. Whereas we did not find any harms stemming from secrecy motivated by concerns of social belonging or social harmony, we found reduced feelings of authenticity and increased regret to the extent that secrecy was motivated by concern for one's reputation. It was specifically through an intrapersonal experience with secrecy (i.e., the frequency of mind wandering to the secret outside of concealment contexts) that these effects emerged. We thus predicted that increasing one's concern for reputation (but not social belonging or social harmony) should reduce feelings of authenticity. Study 2 tested this hypothesis across a diverse set of

secrets. We examined whether prompting concern about one's reputation with regard to one's secret would influence feelings of authenticity. Study 3 then examined whether such a link could be explained, in part, by mind wandering to the secret.

Method

Seeking to match the sample size used in the prior studies ($N = 500$), Study 2 sought to recruit participants from Mechanical Turk until 500 passed our a priori checks (i.e., providing honest answers, and having not participated in a study on secrecy previously to ensure no repeat participants across the current work, and across the authors' research program). Participants ($N = 557$; $M_{\text{age}} = 37.39$ years, $SD = 12.28$; 62% female) completed the Common Secrets Questionnaire (Slepian et al., 2017), after which we asked follow-up questions per each of their current secrets, and these measures were crossed by both within- and between-subjects manipulations. Participants who admitted to not providing honest answers ($n = 11$; 2%), and those who previously participated in a study on secrecy ($n = 42$; 7.5%) were excluded, leaving a final sample size of 504 participants ($M_{\text{age}} = 37.68$ years, $SD = 12.13$; 62% female).

The Common Secrets Questionnaire (Slepian et al., 2017) asks participants to indicate which of 38 common categories of secrets they are currently keeping. These categories comprehensively cover the most common secrets people keep (Figure 2). When asking people about a secret they are currently keeping, the recalled secret has a 92% chance of fitting one of the 38 categories, 97% of people have at least one of the categories of secrets, and the average person has 13 of the secrets at any given moment (Slepian et al., 2017). Across these 38 categories, participants, in total, were keeping 6,621 secrets. Figure 2 presents the common secrets kept by Study 2 participants.

Measures. Per each of the secrets that participants were currently keeping ($M = 13.14$, $SD = 7.75$, 95% CI $[12.46, 13.82]$), we asked participants to "think of the person who matters most to you—that you are hiding this thing from." Participants then completed measures of authenticity and relational closeness, adapted from the prior studies: authenticity "I am 100% fully and completely presenting the 'real me' to them" and "I am being 100% fully and completely authentic with them," and relational closeness: "I feel close to them" and "I feel connected to them" (from 1 = *not at all true* to 7 = *very much true*).

Within-subjects manipulation. Participants' secrets were divided into two blocks. In the block randomly presented first, participants simply completed the measures described above. In the second block (containing the remaining portion of their secrets), a manipulation was first presented before participants completed the measures. In other words, the within-subjects factor represents whether a particular secret was first presented with a motivational framing or not.

Between-subjects manipulation. For all participants, their secrets were divided into two blocks, such that one block of measures (for half of participants' secrets) was taken in our control condition, and another block of measures (for the remaining secrets) was taken after an experimental manipulation. The nature of that manipulation, however, was manipulated between subjects: (a) participants in the reputation condition responded to half of their secrets after a reputation motivation framing, (b) participants

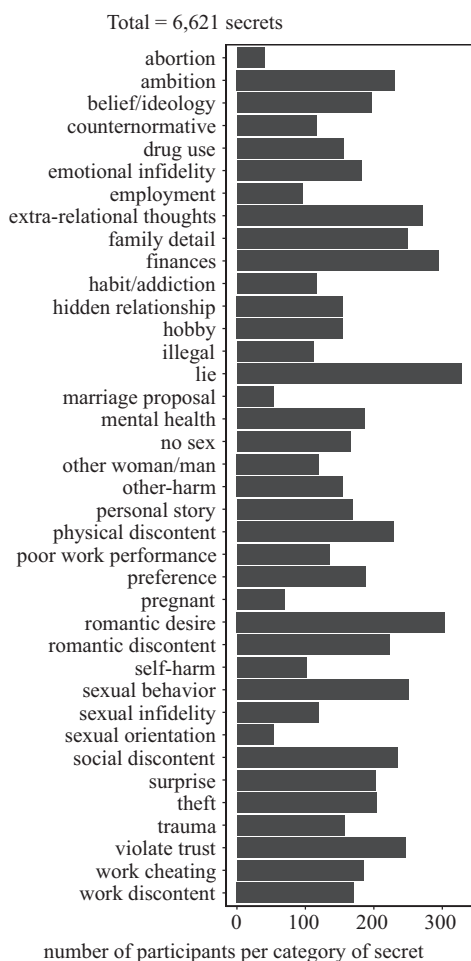


Figure 2. Number of participants who currently have each category of secret: Study 2. To see the full description of each category of secret, see the Common Secrets Questionnaire (Slepian et al., 2017).

in the social belonging condition responded to half of their secrets after a social-belonging motivation framing, and (c) participants in the social harmony condition responded to half of their secrets after a social-harmony motivation framing.

Each manipulation was designed to have participants frame their secret as motivated by the corresponding concern. With any reframing intervention, it is important for participants to endorse the given framing. We thus adopted a method that asks participants to indicate which of three options best fits their situation (with each option fitting the framing condition they had been randomly assigned to). By asking participants which (of the three) best fits their situation, participants are led to focus on thinking about how their secret fits the three variants of the same framing; when picking the one that best fits, they are (by design) endorsing that framing (Slepian & Moulton-Tetlock, 2019). Given that participants have multiple secrets, we thus compare their responses to each secret that came after the experimental manipulation to their responses to each secret that did not follow a framing manipulation.

In other words, for the first block (a random half) of participants' secrets, they simply completed the measures of felt authen-

ticity and relational closeness. For the second block of participants' remaining secrets (the remaining half of their secrets), they also completed those measures, but first responded to the prompt "Which of these best fits your situation?" and chose among three options, adapting language from the Studies 1a and 1b measures.

In the reputation condition they responded to the prompt, "I am keeping this secret because . . ." with the three options: "people would criticize me for it if they found out about it," "people would infer things about me that are not true if they found out about it," and "people would think differently of me if they found out about it."

In the social belonging condition they responded to the prompt, "I am keeping this secret because . . ." with the three options: "I would be afraid people would distance themselves from me if they found out about it," "I would be afraid certain groups I belong to would exclude me if they found out about it," and "I would be afraid that people might support me less if they found out about it."

In the social harmony condition they responded to the prompt, "I am keeping this secret because . . ." with the three options: "I do not want to get into an argument with people about it if they were to find out," "I want to avoid conflicts with people about it," and "people would give me a hard time about it if they found out."

Results

Given that we collected data on multiple secrets per participant (6,621 secrets across the 504 participants) we analyzed our data via multilevel modeling. We implemented multilevel models with R-package lme4 and lmerTest, which ran lmer models through Satterthwaite approximation tests to calculate p values (estimating degrees of freedom to nonwhole numbers to best approximate the F distribution). Participants who had no secrets from the 38 categories ($n = 16$) could not be included in these analyses.

Authenticity. We predicted that the presence of a motivational framing for one's secret would reduce feelings of authenticity, specifically when the motivational framing concerned one's reputation (rather than concern for social belonging, or social harmony). Paralleling the prior studies, we sought to examine the unique outcomes on each dependent measure (authenticity, relational closeness), and thus examined the effects of one, while including the other as a predictor (given their correlation; $r = .68$).

We examined whether presenting the framing manipulation (i.e., 1 = *presented* vs. 0 = *not presented*) interacted with the type of manipulation (manipulated between subjects, 1 = *focal framing*, 0 = *other two framing conditions*) to predict authenticity, treating participant and category of secret as cross-classified random factors.

Before testing for our critical interactions (immediately below) we first tested whether the presence of a framing manipulation (regardless of whether it was reputation based, social belonging based, or social harmony based) influenced feelings of authenticity. There was no main effect of presenting a framing on feelings of authenticity, $b = 0.001$, 95% CI $[-0.05, 0.05]$, $SE = 0.03$, $t(6210.60) = 0.05$, $p = .96$. This was expected as we had predicted that only the reputation motivation framing would influence (i.e., reduce) feelings of authenticity.

Indeed, reputation motivation (1) versus the other motivations (0) interacted with the presence (vs. absence) of the framing manipulation to predict feelings of authenticity, $b = -0.15$, 95%

CI $[-0.25, -0.05]$, $SE = 0.05$, $t(6198.77) = -2.98$, $p = .003$. In contrast, there was no such interaction for social-belonging motivation (vs. the other motivations), $b = -0.04$, 95% CI $[-0.15, 0.06]$, $SE = 0.05$, $t(6193.77) = -0.79$, $p = .43$. Unexpectedly, there was an interaction for social harmony-motivation, $b = 0.21$, 95% CI $[0.10, 0.31]$, $SE = 0.05$, $t(6188.15) = 3.88$, $p = .0001$.

To decompose the significant interactions, we examined the simple effect of the presence (vs. absence) of the framing manipulation, assessed at each condition.³ Indeed, framing one's secrecy as being motivated by concern for one's reputation reduced feelings of authenticity, $b = -0.09$, 95% CI $[-0.17, -0.01]$, $SE = 0.04$, $t(6211.67) = -2.32$, $p = .02$. In contrast, framing one's secrecy as being motivated by concern for social-belonging did not influence feelings of authenticity, $b = -0.03$, 95% CI $[-0.12, 0.06]$, $SE = 0.05$, $t(6199.49) = -0.65$, $p = .52$. And unexpectedly, framing one's secrecy as being motivated by concern for social harmony increased feelings of authenticity, $b = 0.14$, 95% CI $[0.06, 0.23]$, $SE = 0.04$, $t(6181.97) = 3.22$, $p = .001$.

Relational closeness. Intriguingly, for relational closeness, rather than interacting with the type of framing condition, there was a main effect of presenting a motivational framing for one's secrecy—such that presenting any framing reduced relational closeness, regardless of the content of that framing (i.e., reputation, social belonging, social harmony), $b = -0.19$, 95% CI $[-0.25, -0.14]$, $SE = 0.03$, $t(6238.49) = -7.17$, $p < .0001$.

Accordingly, for each type of framing condition, presenting the motivational framing reduced relational closeness: reputation framing, $b = -0.13$, 95% CI $[-0.22, -0.04]$, $SE = 0.04$, $t(6249.44) = -2.95$, $p = .003$, social belonging framing, $b = -0.21$, 95% CI $[-0.31, -0.11]$, $SE = 0.05$, $t(6229.53) = -4.28$, $p < .0001$, and social harmony framing, $b = -0.25$, 95% CI $[-0.35, -0.16]$, $SE = 0.05$, $t(6209.84) = -5.34$, $p < .0001$.

Discussion

Studies 1a and 1b reliably found one route to harm from motivated secrecy. Secrecy motivated by concern for one's reputation predicted reduced feelings of authenticity, through increased mind wandering to the secret. Experimentally intervening by framing participants' secrecy as motivated by one of the three motives, Study 2 replicated the reputation-authenticity effect from both prior studies.

Framing secrecy as motivated by concern for one's reputation reduced feelings of authenticity. Interestingly, it seems that increasing one's awareness of secrecy as motivated by any social concern led to reduced feelings of relational closeness. While this latter finding was not predicted, it does demonstrate that—as in the prior studies—there was no relationship between a specific motivation for secrecy and feelings of lower relational closeness.

We also unexpectedly found that manipulating a concern for social harmony increased feelings of authenticity. One possible explanation for this effect is that people see action taken to avoid a conflict as prosocial (relative to concern with one's reputation or one's own social inclusion), and thus feel such prosocial behavior is authentic.

Study 3: Secrets From Partners

Across Studies 1a, 1b, and 2, we found a reliable path from motivated secrecy to downstream harm. Specifically, when se-

crecy was motivated by concern for one's reputation, people felt that they were being less authentic. In Studies 1a and 1b, we found this effect by measuring the extent to which people were motivated by reputation concerns, and it operated through an increased tendency to mind-wander to the secret. In Study 2, we found this effect by manipulating the motivational framing for one's secret. We suggest that what explains both effects is that secrets kept to protect one's reputation are more threatening to the self.

Threats to the self are associated with lower feelings of authenticity (Schmader & Sedikides, 2018), and recent work finds that a threat to the self—in the form of reduced self-efficacy—explains an increased mind wandering to secrets (Slepian & Moulton-Tetlock, 2019). That is, recent work suggests that a tendency to repetitively mind wander to secrets is a reflection of coping poorly with that secret (Slepian & Moulton-Tetlock, 2019). Hence, if secrecy motivated by concern for one's reputation is particularly threatening to the self, then a secret motivated by reputational concerns may feel particularly challenging to cope with. We thus predicted that manipulated reputation motivation would influence mind wandering to the secret through changing perceived coping efficacy.

We designed a study to replicate both the manipulated effect of reputation motivation (from Study 2), and also the measured effect operating through mind wandering to the secret (from Studies 1a and 1b). Although Study 2 found experimental evidence that increasing reputational concerns about secrecy undermines feelings of authenticity, from an intervention perspective it is also important to show that reducing these concerns can bring some benefit. Thus, we introduced a manipulation designed to reduce reputational concerns expecting this manipulation to increase coping efficacy, and thereby reduce mind wandering to the secret, with benefits for feelings of authenticity.

Method

Following recommendations in prior work to reduce error variance in the kinds of secrets recalled, we held constant the target of the secret (i.e., secrets from partners; see Slepian et al., 2017). We thus specifically recruited participants who were in a committed relationship for a three-time-point longitudinal study. Participants were recruited in the morning, randomly assigned to a reputation intervention condition (or control, no intervention), and responded to our outcome measures twice: once in the evening of the same day and a second time the following evening. We collected as many participants as possible in the morning before taking the study down in the afternoon to allow for sufficient time between

³ Specifically, to examine an interaction between our binary within-subjects manipulation (presence vs. absence) and the three-level between-subjects manipulation (reputation, social belonging, social harmony), we adopt the standard dummy-coded approach (this is similar to ANOVA-based approaches, but takes a regression-based solution, required by multilevel modeling). That is, with two dummy codes, we code for the three-level moderator (1 = a given condition, 0 = the other two conditions). When entering the interaction between the binary IV (1 = presence and 0 = absence of framing) and two dummy-codes, the effect of the IV is the simple effect of the manipulation for the un-entered dummy framing (i.e., the effect of IV in DV \sim IV \times DummyA + IV \times DummyB is the effect of IV for Dummy C (1 vs. 0). Assessing the IV at each of the three combinations of dummy interaction terms thus gives the effect of each framing manipulation.

Time 1 and Time 2, resulting in 305 participants ($M_{\text{age}} = 34.66$ years, $SD = 15.77$; 60% female).

Time 1. Participants were asked to recall a secret they were currently keeping from their partner that they feel bad about (from Slepian et al., 2017). Participants were encouraged to think of one, and only if they could not think of a secret, to indicate that they had no such secret ($n = 5$). As an additional manipulation check, we also asked whether the participant's partner was aware of the secret, and those who indicated that their partner was indeed aware of the recalled information failed the manipulation check ($n = 60$).

Next, we took baseline measures of the frequency of concealing the secret and mind wandering to the secret, using the measures from Studies 1a and 1b. Specifically, for the baseline measure, participants were asked to estimate the number of times yesterday that they thought about their secret when not with their partner (mind-wandering frequency) and the number of times they had to conceal the secret when interacting with their partner (concealment frequency).

If participants passed the qualification and manipulation checks, they were invited to the longitudinal portion of the study; 218 participants indicated that they would participate in the remaining portion of the study. Participants were then randomly assigned to a control condition, or an intervention condition. In the control condition, participants simply completed a measure of perceived efficacy in coping with the secret (described below). In the intervention condition, participants responded to a prompt designed to reduce reputational concerns, and then completed the measure of perceived coping efficacy. We excluded participants who did not write text per the intervention prompt ($n = 18$), leaving a final sample of 200 participants ($M_{\text{age}} = 34.59$ years, $SD = 11.49$; 62% female).

Intervention prompt. Participants assigned to the intervention condition were told:

If your partner were to learn the secret, they might be surprised or even hurt. And even if it would be hard to work through the secret together—what would help in that process is their feelings toward and respect for you.

Participants then responded to the prompt, "Please write in the below box . . . about how even if your partner found out about this secret, they would still at the end of the day, think highly of you in the areas that count."

This prompt was designed to have participants consider the ways in which their reputation would not suffer if their partner were to discover their secret.

Perceived coping efficacy. Participants were asked, "How capable do you feel in your ability to cope with this secret?," "How much do you feel in control over this situation?," and "How well do you feel like you are handling the secret?" from 1 = *not at all* to 7 = *very much*, $\alpha = .88$ (from Slepian & Moulton-Tetlock, 2019).

Times 2 and 3. Participants were contacted to continue the study in the evening (using TurkPrime; Litman, Robinson, & Abberbock, 2017), and 153 participants completed Time 2. On the following night, participants were contacted again to participate in the final part of the study, and 93 participants completed Time 3. In total, we thus collected 246 data points per each of our outcome

measures (across Times 2 and 3, which occurred postmanipulation). We analyzed all data points using multilevel modeling.

Participants were asked to indicate the number of times that day they spontaneously thought about their secret when not with their partner (mind-wandering frequency) and the number of times they had to conceal the secret when interacting with their partner (concealment frequency).

Subsequently, from 1 = *not at all true* to 7 = *very much true*, participants completed measures of authenticity ("When it comes to this secret, I feel that I am not being fully authentic with my partner" and "When it comes to this secret, I feel that I am not holding back the 'real me' from my partner," reversed) and relational closeness ("I feel close to my partner" and "I feel connected to my partner"). And at Time 2 only, participants reported how much (1 = *not at all* to 7 = *very much*) they regretted their secret.

Results

Time 1. Intervention improving coping efficacy. We first examined whether the motivational framing manipulation increased perceived coping efficacy. Indeed, those in the intervention condition had higher perceived coping efficacy ($M = 5.61$, $SD = 1.26$, 95% CI [5.35, 5.87]), relative to those in the control no-intervention condition ($M = 5.17$, $SD = 1.56$, 95% CI [4.87, 5.46]), $t(198) = 2.19$, $p = .03$, $d = 0.21$, 95% CI [0.02, 0.39].

Times 2 and 3. Coping efficacy predicting mind-wandering frequency. Examining all collected observations of mind wandering across Times 2 and 3, we next examined whether Time 1 coping efficacy predicted mind-wandering frequency on the following days. Indeed, this was the case, $b = -0.41$, 95% CI [-0.59, -0.23], $SE = 0.09$, $t(138.43) = -4.41$, $p < .0001$, including when also controlling for condition, thus yielding the b path in an indirect effect, $b = -0.41$, 95% CI [-0.59, -0.22], $SE = 0.09$, $t(136.32) = -4.38$, $p < .0001$.

Finally, coping efficacy predicted mind-wandering frequency when controlling for both condition (to yield the b path in an indirect effect model, per above) and baseline mind-wandering (measured at Time 1), $b = -0.33$, 95% CI [-0.50, -0.17], $SE = 0.08$, $t(142.99) = -3.95$, $p < .001$. By controlling for the Time 1 measure of mind wandering (collected before the manipulation was presented), this latter effect on mind wandering represents a change in mind wandering from baseline. Note that only the 153 participants who provided follow-up data could be included in these analyses on mind-wandering outcomes.

Outcome variables. We next present the effects of mind wandering on each of our outcome variables (authenticity, regret, and relational closeness), again when including the baseline mind-wandering measure as well as coping efficacy and condition—so that we are examining the effect of changes in mind wandering from baseline, as a function of increased coping efficacy from the intervention (full multilevel model tables are presented in Tables 3, 4, and 5).

Authenticity. As in Studies 1a and 1b, increased mind wandering to one's secret predicted reduced feelings of authenticity, $b = -0.18$, 95% CI [-0.28, -0.08], $SE = 0.05$, $t(232.01) = -3.46$, $p < .001$. Accordingly, we examined a serial indirect effect, testing whether the intervention increased feelings of authenticity, through increased coping efficacy and thereby reduced mind wandering to the secret. Indeed, this serial indirect

Table 3
Predicting Mind-Wandering and Concealment Frequencies (Study 3)

| Predictor | Predicting mind-wandering frequency | | | | | Predicting concealment frequency | | | | |
|--------------------------|-------------------------------------|-----------|--------------|----------|----------|----------------------------------|-----------|-------------|----------|----------|
| | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> |
| Coping efficacy | -.21 | .08 | [-.37, -.05] | -2.63 | .009 | -.08 | .05 | [-.19, .02] | -1.53 | .13 |
| Intervention (y/n) | -.02 | .21 | [-.43, .40] | -.09 | .93 | -.02 | .14 | [-.30, .26] | -.14 | .89 |
| Baseline frequency | .23 | .04 | [.14, .31] | 5.22 | <.001 | .20 | .06 | [.08, .32] | 3.25 | .001 |
| Concealment frequency | .59 | .09 | [.40, .77] | 6.29 | <.001 | | | | | |
| Mind-wandering frequency | | | | | | .22 | .04 | [.14, .29] | 5.90 | <.001 |

Note. In the left panel, baseline frequency is baseline mind-wandering frequency, and in the right panel, baseline frequency is baseline concealment frequency. When entering baseline frequency per each analysis, outcomes can be interpreted as changes in the frequency of mind wandering (left) and concealment (right). CI = confidence interval.

effect was significant, $Z_{\text{Mediation}} = 5.17$, 95% CI [3.21, 7.13], $p < .0001$ (see Tables 4 and 5 for full results, and all indirect effect tests; indirect effects calculated with the $Z_{\text{Mediation}}$ formula (which sidesteps the lack of current consensus on how to bootstrap multilevel data; Iacobucci, 2012).

Relational closeness. We conducted parallel analyses on relational closeness. Also consistent with Studies 1a and 1b, mind-wandering to the secret did not predict relational closeness, $b = -0.02$, 95% CI [-0.11, 0.06], $SE = 0.04$, $t(149.88) = -0.57$, $p = .57$, and accordingly, there was no serial indirect effect (as per above) on relational closeness, $Z_{\text{Mediation}} = 1.06$, 95% CI [-0.9, 3.02], $p = .29$.

Regret. We also conducted parallel analyses on regret. Just as in Study 1b (the study that also measured regret), increased mind wandering predicted greater regret about one's secret, $b = 0.23$, $SE = 0.09$, 95% CI [0.04, 0.42], $t(144) = 2.42$, $p = .02$. Accordingly, a serial indirect effect demonstrated that the intervention reduced regret through increasing coping efficacy, and thereby reducing mind wandering to the secret, $Z_{\text{Mediation}} = -4.01$, 95% CI [-5.97, -2.05], $p < .0001$.

Concealment. These effects were specific to mind-wandering, and not a function of concealment. Tables 3 and 4 demonstrate that the effects operate independent of concealment, and that the effects do not operate through concealment. Tables 4 and 5 demonstrate that the results on our outcome variables remain the same when controlling for the alternate outcomes.

Discussion

Study 3 replicated and extended our prior effects. We found a path—through mind wandering—by which a reputation motivation for secrecy was related to both feelings of lower authenticity and increased regret (as in Studies 1a and 1b). Moreover, as in the prior studies, these effects did not operate through concealment nor did they extend to feelings of relational closeness. These findings provide further evidence that the harm associated with secrecy is more intrapersonally based than interpersonally based.

Additionally, we demonstrated a mechanism by which motivations for secrecy relate to mind wandering to secrets. In Study 2, we found that a manipulation that increased the salience of reputation motivations for a secret made one feel less authentic with respect to that secret. We hypothesized one process that might explain this effect was coping efficacy, which has previously been linked to mind wandering to secrets (Slepian & Moulton-Tetlock,

2019). Indeed, integrating the current studies and prior findings, we found that by reducing reputation-related concerns for a secret kept from one's partner, participants felt more capable in coping with the secret, which reduced repetitive mind wandering to the secret, and consequently increased feelings of authenticity and reduced regret.

General Discussion

The concept of secrecy often conjures up an image of two people in interaction, one person biting their tongue and actively concealing from the other. These moments of concealment have been previously theorized to define secrecy as well as explain its harm. A recent body of work, however, suggests that relative to the number of times people conceal their secrets in social interactions, people mind wander to their secrets outside of these concealment contexts far more frequently (Slepian et al., 2017). Moreover, it is these mind-wandering episodes (rather than active concealment) that largely explain the harm of secrecy (Slepian et al., 2017; Slepian & Moulton-Tetlock, 2019).

This prior work suggested the harm of secrecy is more intrapersonal than interpersonal, and that to better understand the harms of secrecy, research should examine intrapersonal experiences with secrets. Indeed, this was the goal of the present work. We identified and examined three motivations for secrecy—secrecy motivated by concern for one's reputation, social belonging, and social harmony. These social motives for secrecy were first examined in a specific context (keeping one's vote secret in the 2016 United States presidential election).

Studies 1a and 1b found that reputational concerns, in particular, were associated with a central harm of secrecy (i.e., mind wandering to one's secret), and this relationship explained reduced feelings of authenticity (Studies 1a and 1b). Studies 2 and 3 found that this effect generalizes to other domains. Across the diverse secrets people commonly keep, experimentally prompting reputational concerns for secrecy reduced feelings of authenticity when it came to one's secret (Study 2). Additionally, as in Study 1, we found that this effect was mediated by the frequency of mind wandering to the secret (Study 3, examining the secrets people keep from their partners).

Specifically, across a three-time-point longitudinal design, we found that experimentally reducing reputational concerns for secrecy reduced daily mind wandering to one's secret, as a function of coping efficacy. Aligning with another recent secrecy interven-

Table 4
Predicting Outcome Variables (Study 3)

| Predictor | Predicting feelings of authenticity | | | Predicting relational closeness | | | Predicting feelings of regret | | |
|--------------------------|-------------------------------------|-----------|--|---------------------------------|-----------|-----------------------------------|-------------------------------|-----------|--|
| | <i>b</i> | <i>SE</i> | <i>p</i> | <i>b</i> | <i>SE</i> | <i>p</i> | <i>b</i> | <i>SE</i> | <i>p</i> |
| Mind-wandering frequency | -.16 | .06 | .005 | -.01 | .05 | .87 | .23 | .10 | .02 |
| Concealment frequency | -.10 | .09 | .28 | -.05 | .08 | .53 | .10 | .16 | .53 |
| Coping efficacy | .27 | .08 | .0004 | .13 | .09 | .14 | -.44 | .12 | .0003 |
| Intervention (y/n) | .16 | .19 | .42 | -.08 | .24 | .73 | -.06 | .32 | .85 |
| Baseline mind wandering | .12 | .04 | .008 | .07 | .05 | .21 | -.20 | .07 | .008 |
| Baseline concealment | .05 | .09 | .57 | -.13 | .11 | .23 | -.16 | .15 | .27 |
| Interv → Cope | → Auth | | 1.82 [-.14, 3.78], <i>p</i> = .07 | → Close | | 1.82 [-.81, 3.11], <i>p</i> = .07 | → Regret | | 1.82 [-.81, 3.11], <i>p</i> = .07 |
| Interv → Cope → Mind-w | → Auth | | 3.60 [1.64, 5.56], <i>p</i> = .0003 | → Close | | .26 [-1.70, 2.22], <i>p</i> = .79 | → Regret | | -3.13 [-5.09, -1.17], <i>p</i> = .002 |
| Interv → Cope → Conceal | → Auth | | 1.18 [-.78, 3.14], <i>p</i> = .07 | → Close | | .72 [-1.24, 2.68], <i>p</i> = .47 | → Regret | | -.72 [-2.68, 1.24], <i>p</i> = .47 |

Note. By including baseline mind-wandering frequency and baseline concealment frequency, mind-wandering frequency and concealment frequency represent changes in mind wandering and concealment frequencies. Bottom panel reports indirect effects including the predictors from the top panel, calculated using the $Z_{\text{Mediation}}$ formula (Iacobucci, 2012) from intervention (Interv) to outcome variable (a) through coping efficacy (Cope), (b) through coping efficacy and resulting changes in mind wandering (Mind-w), and (c) through coping efficacy and resulting changes in concealment (Conceal). CI = confidence interval; Auth = authenticity. Significant indirect effects are in bold.

Table 5
Predicting Outcome Variables With Additional Controls (Study 3)

| Predictor | Predicting feelings of authenticity | | | Predicting relational closeness | | | Predicting feelings of regret | | |
|--------------------------|-------------------------------------|-----------|---|---------------------------------|-----------|------------------------------------|-------------------------------|-----------|--|
| | <i>b</i> | <i>SE</i> | <i>p</i> | <i>b</i> | <i>SE</i> | <i>p</i> | <i>b</i> | <i>SE</i> | <i>p</i> |
| Mind-wandering frequency | -.14 | .06 | .01 | .0004 | .05 | .99 | .19 | .10 | .07 |
| Concealment frequency | -.05 | .09 | .56 | -.03 | .08 | .73 | .10 | .16 | .52 |
| Coping efficacy | .20 | .08 | .001 | .10 | .09 | .29 | -.37 | .12 | .003 |
| Intervention (y/n) | .17 | .19 | .36 | -.09 | .24 | .69 | -.03 | .31 | .92 |
| Baseline mind wandering | .08 | .04 | .05 | .06 | .05 | .30 | -.17 | .08 | .03 |
| Baseline concealment | .05 | .09 | .54 | -.14 | .11 | .20 | -.15 | .14 | .31 |
| Regret | -.11 | .05 | .03 | .003 | .06 | .96 | .07 | .11 | .54 |
| Relational close | .21 | .06 | .001 | .12 | .06 | .03 | -.24 | .12 | .06 |
| Authenticity | | | | | | | | | |
| Interv → Cope | → Auth | | 1.60 [-.36, 3.56], <i>p</i> = .11 | → Close | | .88 [-1.08, 2.84], <i>p</i> = .38 | → Regret | | -1.71 [-3.67, .25], <i>p</i> = .09 |
| Interv → Cope → Mind-w | → Auth | | 3.32 [1.36, 5.28], <i>p</i> = .001 | → Close | | -.01 [-1.97, 1.95], <i>p</i> = .99 | → Regret | | -2.62 [-4.58, -.66], <i>p</i> = .01 |
| Interv → Cope → Conceal | → Auth | | .68 [-1.28, 2.64], <i>p</i> = .50 | → Close | | .40 [-1.56, 2.36], <i>p</i> = .69 | → Regret | | -.74 [-2.7, 1.22], <i>p</i> = .46 |

Note. Analyses as in Table 4, including additional controls (see Table 4 note for details). Significant indirect effects are in bold.

tion (Slepian & Moulton-Tetlock, 2019), we examined coping efficacy as a mechanism by which providing an intervention would explain changes in daily experience with one's secret. Studies 1 and 2 suggested that secrecy motivated by reputational concerns was particularly harmful. Finding that the burden of a secret is, in part, based in these reputational concerns, we predicted that by easing reputational concerns, a secret would become easier to cope with.

By reducing reputational concerns for one's secret, people felt more capable in coping with a secret. Suggesting actual improvements in coping, we found reduced mind wandering to the secret as a function of increased feelings of efficacy (Slepian & Moulton-Tetlock, 2019). These reductions in mind wandering to the secret explained improved personal outcomes (increased feelings of authenticity and reduced regret).

Implications for Secrecy and Mind Wandering

Studies 1a, 1b, and 3 each measured mind wandering to and concealment of one's secret. Across all studies, when examining concealment and mind wandering as simultaneous predictors of harm, we found that only mind wandering to the secret (and not concealment) was associated with harm. This is consistent with prior work (Slepian et al., 2017; Slepian & Moulton-Tetlock, 2019). After accounting for the harm of mind wandering to secrets, this body of work has not found a reliable harm from concealment. Why might concealment not be consistently harmful? While concealment can be taxing in the moment (Critcher & Ferguson, 2014), if its intention is to promote a positive social interaction, concealment is not harmful (Newheiser, Barreto, Ellemers, Derks, & Scheepers, 2015). Indeed, such an experience may, at times, be experienced positively as successful goal pursuit (Liu & Slepian, 2018; Slepian & Greenaway, 2018).

Importantly, a rigid tendency to conceal information about the self is associated with a host of harms, given such behavior corresponds with other poor maladaptive coping strategies (e.g., avoiding dealing with one's problems; Larson & Chastain, 1990; Larson, Chastain, Hoyt, & Ayzenberg, 2015).

While generally it is good to disclose aspects of oneself (e.g., Collins & Miller, 1994; Laurenceau, Barrett, & Pietromonaco, 1998; Miller & Kenny, 1986; Reis & Shaver, 1988), concealing a specific secret might be associated with some benefits, such as promoting a positive social interaction (Newheiser et al., 2015), escaping some form of punishment (Slepian & Bastian, 2017), or effectively pursuing one's secrecy goal (Liu & Slepian, 2018). Prior work finds that outside these moments of concealment, however, our secrets are still very much with us, and this seems to be when they harm us the most.

These findings reveal unique insight into the harm of secrecy. Studies 1a and 1b examined secrecy experiences when a secret would be very much top-of-mind and also highly likely to come up in daily conversations—thereby requiring concealment. In those studies, we measured the extent to which people mind wandered to and concealed their secret vote (in the 2016 United States election) in the days that immediately followed (and thus the topic of the secret was a national topic of conversation). Still, people mind wandered to their secret (outside of social interactions) more than they concealed the secret (within social interactions), and it was the former process that was associated with harm. Hence, even for

a secret that notably should require more concealment (as in Studies 1a and 1b), mind-wandering frequency still outperformed concealment frequency in predicting negative implications of secrecy.

According to the current concerns theory of mind wandering (Klinger, 1987, 2013), the mind is particularly likely to return to ongoing concerns. Keeping current concerns top of mind is functional in that it orients one toward opportunities for addressing those concerns and taking action when needed (Mason & Reinholtz, 2015; Smallwood, Brown, Baird, & Schooler, 2012; Stawarczyk, Majerus, Maj, Van der Linden, & D'Argembeau, 2011). Indeed, mind wandering often involves planning goal-directed actions (Baird, Smallwood, & Schooler, 2011; Mason & Reinholtz, 2015; Stawarczyk, Cassol, & D'Argembeau, 2013). We add to this work by demonstrating that not all concerns are created equal. In particular, those involving the self, rather than social others, seem to be most associated with an increased tendency to mind wander. Future work would benefit from more closely integrating the work on mind wandering with that on social motives to better understand when and to what the mind wanders to, and to what consequences.

Implications for Authenticity, Relationships, and Politics

A recent model of authenticity (Schmader & Sedikides, 2018) suggests that certain contexts can reduce feelings of fit (whether goal fit, social fit, or self-concept fit). The model suggests that when contexts reduce feelings of fit (on any of the dimensions), feelings of authenticity then suffer. While the present work was not specifically designed to align with the three types of fit identified by the state authenticity as fit to the environment (SAFE) model, there seems to be a close alignment. Our social-belonging motivation recalls the SAFE model's social fit; our reputation motivation recalls the SAFE self-concept fit; and finally our social-harmony motivation is a salient interpersonal goal (and thus could represent goal-fit). Reputational motivations may more clearly implicate the self than the other motivations given they involve a relatively greater focus on, and concern about, how one is seen by others. Our finding that reputation motivation had pronounced effects for both mind wandering and authenticity dovetails with the SAFE model suggestion that, across contexts, self-concept might be the broadest form of fit, relative to the others, and hence have the strongest links to authenticity.

This suggests that when current concerns are focused more on the self, as opposed to social others, the mind may be particularly likely to wander to these concerns, and when such concerns evoke stress or threat, they may threaten feelings of authenticity. Indeed, our findings are consistent with this suggestion, and also suggest a mechanism linking the two constructs. We found that reputation concerns for secrecy were linked to reduced feelings of efficacy. Coping with a secret that threatens the self-concept may feel particularly burdensome, and hence a secret motivated by reputation concerns may weigh more on the mind and, correspondingly, feelings of authenticity. Moreover, our findings suggest that feelings of efficacy may play a role in this process. Feelings of efficacy explain a link between having a stressor and mind wandering to it (Ottaviani, Shapiro, & Couyoumdjian, 2013; Slepian & Moulton-Tetlock, 2019; Wayment, Collier, Birkett, Traustadóttir,

& Till, 2015). And thus, we would predict that when a context reduces feeling of fit (self-concept fit, goal fit, social fit), people will feel less capable in coping with the stressor, explaining an increase in mind wandering to it as well as reduced feelings of authenticity.

Finally, we believe that Studies 1a and 1b can also speak to larger sociopolitical issues. The partisan divide has never been wider or more acrid (Pew Research Center, 2016, 2017) and recent research has demonstrated that this leads people to avoid those with whom they disagree on social media (Brady, Wills, Jost, Tucker, & Van Bavel, 2017) and in their communities (i.e., moving away; Motyl, Iyer, Oishi, Trawalter, & Nosek, 2014) rather than engaging in important cross-party political discourse. Our data show that this avoidance goes even further than previously realized. When people disagree with others they cannot avoid, they may avoid the issue entirely by keeping political disagreement secret from those they are close to. Whereas secrecy might achieve personal aims, there may be real societal costs when secrets concern politics, stymieing much needed cross-party dialogue.

Conclusion

The current work examined motivations for secrecy across a number of domains, including politics, relationships, and common secrets that people keep. In each study (2 correlational, 2 experimental), we found that secrecy motivated by reputation concerns was associated with reduced feelings of authenticity, an effect that operated through mind-wandering frequency. Secrecy motivated by reputation concerns was not related to reduced relational closeness.

These results suggest that if one seeks to protect their reputation, such secrecy does not seem to make people feel less close to those from whom the secret is kept, but such secrecy predicts reduced feelings of authenticity as well as increased regret. These studies present the first picture of how social motivations shape experiences of secrecy. Secrecy is certainly taxing during difficult moments of concealment within social interaction, yet the current work reveals that our secrets follow us outside of those concealment moments, weighing on both the mind and the self.

References

- Baird, B., Smallwood, J., & Schooler, J. W. (2011). Back to the future: Autobiographical planning and the functionality of mind-wandering. *Consciousness and Cognition, 20*, 1604–1611. <http://dx.doi.org/10.1016/j.concog.2011.08.007>
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497–529. <http://dx.doi.org/10.1037/0033-2909.117.3.497>
- Berger, J., & Heath, C. (2008). Who drives divergence? Identity signaling, outgroup dissimilarity, and the abandonment of cultural tastes. *Journal of Personality and Social Psychology, 95*, 593–607. <http://dx.doi.org/10.1037/0022-3514.95.3.593>
- Brady, W. J., Wills, J. A., Jost, J. T., Tucker, J. A., & Van Bavel, J. J. (2017). Emotion shapes the diffusion of moralized content in social networks. *PNAS Proceedings of the National Academy of Sciences of the United States of America, 114*, 7313–7318. <http://dx.doi.org/10.1073/pnas.1618923114>
- Collins, N. L., & Miller, L. C. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin, 116*, 457–475.
- Cornwell, J. F., Franks, B., & Higgins, E. T. (2017). How the “truth” self relates to altruism: When your problem is mine. *Social Cognition, 35*, 204–226. <http://dx.doi.org/10.1521/soco.2017.35.2.204>
- Critcher, C. R., & Ferguson, M. J. (2014). The cost of keeping it hidden: Decomposing concealment reveals what makes it depleting. *Journal of Experimental Psychology: General, 143*, 721–735. <http://dx.doi.org/10.1037/a0033468>
- Ditrich, L., & Sassenberg, K. (2016). It’s either you or me! Impact of deviations on social exclusion and leaving. *Group Processes & Intergroup Relations, 19*, 630–652. <http://dx.doi.org/10.1177/1368430216638533>
- Frijns, T., Finkenauer, C., & Keijsers, L. (2013). Shared secrets versus secrets kept private are linked to better adolescent adjustment. *Journal of Adolescence, 36*, 55–64. <http://dx.doi.org/10.1016/j.adolescence.2012.09.005>
- Greenaway, K. H., Wright, R. G., Willingham, J., Reynolds, K. J., & Haslam, S. A. (2015). Shared identity is key to effective communication. *Personality and Social Psychology Bulletin, 41*, 171–182. <http://dx.doi.org/10.1177/0146167214559709>
- Hill, C. E., Thompson, B. J., Cogar, M. C., & Denman, D. W. (1993). Beneath the surface of long-term therapy: Therapist and client report of their own and each other’s covert processes. *Journal of Counseling Psychology, 40*, 278–287. <http://dx.doi.org/10.1037/0022-0167.40.3.278>
- Hubert, M., & Vandervieren, E. (2008). An adjusted boxplot for skewed distributions. *Computational Statistics & Data Analysis, 52*, 5186–5201. <http://dx.doi.org/10.1016/j.csda.2007.11.008>
- Iacobucci, D. (2012). Mediation analysis and categorical variables: The final frontier. *Journal of Consumer Psychology, 22*, 582–594.
- Kelly, A. E., Klusas, J. D., von Weiss, R. T., & Kenny, C. (2001). What is about revealing secrets that is beneficial? *Personality and Social Psychology Bulletin, 27*, 651–665. <http://dx.doi.org/10.1177/0146167201276002>
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York, NY: Guilford Press.
- Klinger, E. (1987). Current concerns and disengagement from incentives. In F. Halisch & J. Kuhl (Eds.), *Motivation, intention, and volition* (pp. 337–347). Berlin, Germany: Springer. http://dx.doi.org/10.1007/978-3-642-70967-8_23
- Klinger, E. (2013). Goal Commitments and the content of thoughts and dreams: Basic principles. *Frontiers in Psychology, 4*, 415. <http://dx.doi.org/10.3389/fpsyg.2013.00415>
- Kohen, Y. (2016, November 7). Confessions of a secret Trump supporter. Retrieved from <http://www.refinery29.com/2016/11/128994/secret-voter-donald-trump-hillary-clinton>
- Laurenceau, J.-P., Barrett, L. F., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of selfdisclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology, 74*, 1238–1251.
- Lane, J. D., & Wegner, D. M. (1995). The cognitive consequences of secrecy. *Journal of Personality and Social Psychology, 69*, 237–253. <http://dx.doi.org/10.1037/0022-3514.69.2.237>
- Larson, D. G., & Chastain, R. L. (1990). Self-concealment: Conceptualization, measurement, and health implications. *Journal of Social and Clinical Psychology, 9*, 439–455. <http://dx.doi.org/10.1521/jscp.1990.9.4.439>
- Larson, D. G., Chastain, R. L., Hoyt, W. T., & Ayzenberg, R. (2015). Self-concealment: Integrative review and working model. *Journal of Social and Clinical Psychology, 34*, 705–e774. <http://dx.doi.org/10.1521/jscp.2015.34.8.705>
- Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology, 68*, 518–530.
- Levine, E. E., & Cohen, T. R. (2018). You can handle the truth: Mispredicting the consequences of honest communication. *Journal of Experimental Psychology: General, 147*, 1400–1429. <http://dx.doi.org/10.1037/xge0000488>
- Litman, L., Robinson, J., & Abberbock, T. (2017). TurkPrime.com: A versatile crowdsourcing data acquisition platform for the behavioral sciences. *Behavior Research Methods, 49*, 433–442.
- Liu, Z., & Slepian, M. L. (2018). Secrecy: Unshared realities. *Current Opinion in Psychology, 23*, 124–128.

- Lupoli, M. J., Levine, E. E., & Greenberg, A. E. (2018). Paternalistic lies. *Organizational Behavior and Human Decision Processes*, *146*, 31–50. <http://dx.doi.org/10.1016/j.obhdp.2018.01.001>
- Mason, M. F., & Reinholdt, N. (2015). Avenues down which a self-reminiscing mind can wander. *Motivation Science*, *1*, 1–21. <http://dx.doi.org/10.1037/mot0000011>
- Mellings, T. M., & Alden, L. E. (2000). Cognitive processes in social anxiety: The effects of self-focus, rumination and anticipatory processing. *Behaviour Research and Therapy*, *38*, 243–257. [http://dx.doi.org/10.1016/S0005-7967\(99\)00040-6](http://dx.doi.org/10.1016/S0005-7967(99)00040-6)
- Miller, L. C., & Kenny, D. A. (1986). Reciprocity of self-disclosure at the individual and dyadic levels: A social relations analysis. *Journal of Personality and Social Psychology*, *50*, 713–719.
- Motyl, M., Iyer, R., Oishi, S., Trawalter, S., & Nosek, B. A. (2014). How ideological migration geographically segregates groups. *Journal of Experimental Social Psychology*, *51*, 1–14. <http://dx.doi.org/10.1016/j.jesp.2013.10.010>
- Neel, R., Kenrick, D. T., White, A. E., & Neuberg, S. L. (2016). Individual differences in fundamental social motives. *Journal of Personality and Social Psychology*, *110*, 887–907. <http://dx.doi.org/10.1037/pspp0000068>
- Newheiser, A. K., Barreto, M., Ellemers, N., Derks, B., & Scheepers, D. (2015). Regulatory focus moderates the social performance of individuals who conceal a stigmatized identity. *British Journal of Social Psychology*, *54*, 787–797. <http://dx.doi.org/10.1111/bjso.12107>
- Ottaviani, C., Shapiro, D., & Couyoumdjian, A. (2013). Flexibility as the key for somatic health: From mind wandering to perseverative cognition. *Biological Psychology*, *94*, 38–43.
- Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science*, *8*, 162–166. <http://dx.doi.org/10.1111/j.1467-9280.1997.tb00403.x>
- Pew Research Center. (June, 2016). *Feelings about partisans and the parties*. Retrieved from <http://www.people-press.org/2016/06/22/1-feelings-about-partisans-and-the-parties/>
- Pew Research Center. (October, 2017). *The partisan divide on political values grows even wider*. Retrieved from <http://www.people-press.org/2017/10/05/the-partisan-divide-on-political-values-grows-even-wider/>
- Quinn, D. M., & Chaudoir, S. R. (2009). Living with a concealable stigmatized identity: The impact of anticipated stigma, centrality, salience, and cultural stigma on psychological distress and health. *Journal of Personality and Social Psychology*, *97*, 634–651. <http://dx.doi.org/10.1037/a0015815>
- Quinn, D. M., & Earnshaw, V. A. (2011). Understanding concealable stigmatized identities: The role of identity in psychological, physical, and behavioral outcomes. *Social Issues and Policy Review*, *5*, 160–190. <http://dx.doi.org/10.1111/j.1751-2409.2011.01029.x>
- Quinn, D. M., & Earnshaw, V. A. (2013). Concealable stigmatized identities and psychological well-being. *Social and Personality Psychology Compass*, *7*, 40–51. <http://dx.doi.org/10.1111/spc3.12005>
- Quinn, D. M., Williams, M. K., Quintana, F., Gaskins, J. L., Overstreet, N. M., Pishori, A., . . . Chaudoir, S. R. (2014). Examining effects of anticipated stigma, centrality, salience, internalization, and outness on psychological distress for people with concealable stigmatized identities. *PLoS ONE*, *9*, e96977. <http://dx.doi.org/10.1371/journal.pone.0096977>
- Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. *Handbook of Personal Relationships*, *24*, 367–389.
- Schmader, T., & Sedikides, C. (2018). State authenticity as fit to environment: The implications of social identity for fit, authenticity, and self-segregation. *Personality and Social Psychology Review*, *22*, 228–259. <http://dx.doi.org/10.1177/1088868317734080>
- Seli, P., Kane, M. J., Smallwood, J., Schacter, D. L., Maillet, D., Schooler, J. W., & Smilek, D. (2018). Mind-wandering as a natural kind: A family-resemblances view. *Trends in Cognitive Sciences*, *22*, 479–490. <http://dx.doi.org/10.1016/j.tics.2018.03.010>
- Seo, S. (2006). *A review and comparison of methods for detecting outliers in univariate datasets*. (Master's thesis), University of Pittsburgh, Pittsburgh, PA.
- Shuntich, R. J. (1976). Some effects of attitudinal similarity and exposure on attraction and aggression. *Journal of Research in Personality*, *10*, 155–165. [http://dx.doi.org/10.1016/0092-6566\(76\)90068-4](http://dx.doi.org/10.1016/0092-6566(76)90068-4)
- Skitka, L. J., Bauman, C. W., & Sargis, E. G. (2005). Moral conviction: Another contributor to attitude strength or something more? *Journal of Personality and Social Psychology*, *88*, 895–917. <http://dx.doi.org/10.1037/0022-3514.88.6.895>
- Slepian, M. L., & Bastian, B. (2017). Truth or punishment: Secrecy and punishing the self. *Personality and Social Psychology Bulletin*, *43*, 1596–1611.
- Slepian, M. L., Chun, J. S., & Mason, M. F. (2017). The experience of secrecy. *Journal of Personality and Social Psychology*, *113*, 1–33. <http://dx.doi.org/10.1037/pspa0000085>
- Slepian, M. L., & Greenaway, K. H. (2018). The benefits and burdens of keeping others' secrets. *Journal of Experimental Social Psychology*, *78*, 220–232. <http://dx.doi.org/10.1016/j.jesp.2018.02.005>
- Slepian, M. L., Halevy, N., & Galinsky, A. D. (2019). The solitude of secrecy: Thinking about secrets evokes motivational conflict and feelings of fatigue. *Personality and Social Psychology Bulletin*. Advance online publication. <http://dx.doi.org/10.1177/0146167218810770>
- Slepian, M. L., Kirby, J. N., & Kalokerinos, E. K. (2019). Shame, guilt, and secrets on the mind. *Emotion*. Advance online publication. <http://dx.doi.org/10.1037/emo0000542>
- Slepian, M. L., & Moulton-Tetlock, E. (2019). Confiding secrets and well-being. *Social Psychological & Personality Science*. Advance online publication. <http://dx.doi.org/10.1177/1948550618765069>
- Smallwood, J., Brown, K., Baird, B., & Schooler, J. W. (2012). Cooperation between the default mode network and the frontal-parietal network in the production of an internal train of thought. *Brain Research*, *1428*, 60–70.
- Stankou, E., van Kleef, G. A., Homan, A. C., & Galinsky, A. D. (2016). How norm violations shape social hierarchies: Those who stand on top block norm violators from rising up. *Group Processes & Intergroup Relations*, *19*, 608–629. <http://dx.doi.org/10.1177/1368430216641305>
- Stawarczyk, D., Cassol, H., & D'Argembeau, A. (2013). Phenomenology of future-oriented mind-wandering episodes. *Frontiers in Psychology*, *4*, 425.
- Stawarczyk, D., Majerus, S., Maj, M., Van der Linden, M., & D'Argembeau, A. (2011). Mind-wandering: Phenomenology and function as assessed with a novel experience sampling method. *Acta Psychologica*, *136*, 370–381. <http://dx.doi.org/10.1016/j.actpsy.2011.01.002>
- Stutterheim, S. E., Baas, I., Roberts, H., Brands, R., Schmidt, J., Lechner, L., & Kok, G. (2016). Stigma experiences among substance users with HIV. *Stigma and Health*, *1*, 123–145. <http://dx.doi.org/10.1037/sah0000015>
- Vangelisti, A. L. (1994). Family secrets: Forms, functions and correlates. *Journal of Social and Personal Relationships*, *11*, 113–135. <http://dx.doi.org/10.1177/0265407594111007>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063–1070. <http://dx.doi.org/10.1037/0022-3514.54.6.1063>
- Wayment, H. A., Collier, A. F., Birkett, M., Traustadóttir, T., & Till, R. E. (2015). Brief quiet ego contemplation reduces oxidative stress and mind-wandering. *Frontiers in Psychology*, *6*, 1481.

Appendix

Additional Analyses

As noted in the main text, in Studies 1a and 1b, a factor analysis of our motivational scale generated a set of factors that shifted slightly from our predicted motivation composites. We predicted reputational concerns would primarily refer to one's own self-image (and designed 4 of the 12 items to this effect). Yet, two items intended to capture aspects of social belongingness and two items intended to capture social harmony actually loaded onto this reputation factor. This factor analysis suggested (a) a broader (empirically derived) factor for one's concern with reputation, which related to people's broad concerns with how they are viewed in others' eyes. Correspondingly, the factor analysis also suggested (b) a factor centering on more narrow concerns with one's social network (rather than broad belongingness concerns),

and (c) a factor centering on more narrow concerns with creating conflict with others (rather than broad concerns with social harmony). In the following, we report this factor analysis, along with all Study 1a and 1b results, using our predicted factor breakdown, as well as the empirically derived factors (Table A1).

As can be seen in the following tables, in all cases, reputation concerns (but not the other concerns) predicts mind-wandering frequency (Tables A2, A3, A6, and A7). Likewise, in all cases, mind-wandering frequency predicts lower feelings of authenticity (Tables A4, A5, A8, and A9), and increased regret (Tables A5 and A9). Interestingly, social belonging concerns reliably predicted concealment (Tables A2 and A3), but the more narrow concern regarding one's social network did not (Tables A6 and A7).

Table A1
Factor Analysis of Motivation Scale, Study 1a (Study 1b)

| Predicted factors | Empirical factors | | |
|--|------------------------|----------------------------|----------------------|
| | Reputation (empirical) | Social network (empirical) | Conflict (empirical) |
| Reputation (predicted) | | | |
| People would infer things about me that are not true if they knew I voted for [piped text] | .76 (.84) | -.05 (-.02) | .09 (.06) |
| Most people I know would think differently of me for supporting [piped text] | .75 (.77) | .31 (.25) | .19 (.12) |
| I don't want others to criticize me for supporting [piped text] | .66 (.77) | .02 (.08) | .34 (.2) |
| I don't want to be known as someone who supports [piped text] | .60 (.69) | .09 (.24) | .13 (.04) |
| Social Belonging (predicted) | | | |
| I would be afraid certain groups I belong to (friends groups, or other organizations) would exclude me for supporting [piped text] | .79 (.81) | .26 (.15) | .05 (.08) |
| I would be afraid people I care about would feel less close to me if they knew I supported [piped text] | .76 (.78) | .35 (.22) | .08 (.15) |
| I don't know anyone else who supports [piped text] | .09 (.11) | .90 (.91) | .07 (.07) |
| I have no one to talk to about why I support [piped text] | .23 (.25) | .85 (.86) | .09 (.08) |
| Social Harmony (predicted) | | | |
| I don't want to get into an argument with people who I know that support [piped text] | .21 (.16) | .06 (.07) | .90 (.93) |
| I want to avoid conflicts with people I know who support [piped text] | .21 (.19) | .13 (.08) | .90 (.92) |
| It would make my relationships with people I care about hard if they knew I supported [piped text] | .67 (.65) | .20 (.08) | .30 (.37) |
| People I know would give me a hard time for supporting [piped text] | .65 (.79) | .03 (.09) | .41 (.22) |

Note. Bold loadings indicate empirical factor breakdown.

(Appendix continues)

Table A2
Independent Effects of Predicted Motivation Factors on Mind Wandering to and Concealing Secrets (Study 1a)

| Predictor | Predicting mind-wandering frequency | | | | | Predicting concealment frequency | | | | |
|----------------|-------------------------------------|------------|-------------|-------------|------------|----------------------------------|------------|-------------|--------------|-------------|
| | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> |
| Reputation | .28 | .12 | [.05, .51] | 2.37 | .02 | -.15 | .10 | [-.34, .04] | -1.57 | .12 |
| Belonging | -.03 | .09 | [-.21, .15] | -.33 | .74 | .22 | .08 | [.07, .37] | 2.84 | .005 |
| Harmony | .14 | .10 | [-.07, .34] | 1.32 | .19 | .07 | .09 | [-.10, .24] | .76 | .45 |
| Conservatism | <.01 | .07 | [-.14, .14] | -.01 | >.99 | .03 | .06 | [-.09, .14] | .46 | .65 |
| Concealment | .51 | .05 | [.41, .61] | 10.06 | <.001 | | | | | |
| Mind wandering | | | | | | .35 | .03 | [.28, .42] | 10.06 | <.001 |

Note. Focal motivation variables are in bold.

Table A3
Independent Effects of Predicted Motivation Factors on Mind Wandering to and Concealing Secrets (Study 1b)

| Predictor | Predicting mind-wandering frequency | | | | | Predicting concealment frequency | | | | |
|----------------|-------------------------------------|------------|--------------|-------------|------------|----------------------------------|------------|-------------|-------------|------------|
| | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> |
| Reputation | .16 | .07 | [.03, .29] | 2.39 | .02 | -.04 | .07 | [-.17, .09] | -.58 | .56 |
| Belonging | .09 | .06 | [-.04, .21] | 1.40 | .16 | .11 | .06 | [-.01, .23] | 1.87 | .06 |
| Harmony | -.04 | .06 | [-.16, .08] | -.70 | .49 | -.03 | .06 | [-.14, .09] | -.43 | .67 |
| Conservatism | -.14 | .04 | [-.22, -.05] | -3.19 | .002 | .06 | .04 | [-.02, .14] | 1.42 | .16 |
| Concealment | .46 | .04 | [.37, .54] | 10.38 | <.001 | | | | | |
| Mind wandering | | | | | | .43 | .04 | [.35, .51] | 10.38 | <.001 |

Note. Focal motivation variables are in bold.

Table A4
Independent Effects of Mediators (in Bold) on Outcomes of Voting Secrecy (Study 1a)

| Predictor | Predicting feelings of personal authenticity | | | | | Predicting feelings of relational closeness | | | | |
|----------------|--|------------|--------------|--------------|-----------------|---|------------|-------------|-------------|------------|
| | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> |
| Mind wandering | -.11 | .03 | [-.17, -.05] | -3.78 | <.001 | .07 | .03 | [.02, .13] | 2.58 | .01 |
| Concealment | -.02 | .04 | [-.09, .05] | -.56 | .58 | -.03 | .03 | [-.10, .03] | -.93 | .35 |
| Reputation | .04 | .08 | [-.11, .19] | .49 | .63 | .10 | .07 | [-.04, .24] | 1.43 | .15 |
| Belonging | -.14 | .06 | [-.26, -.02] | -2.32 | .02 | -.06 | .06 | [-.17, .05] | -1.01 | .31 |
| Harmony | -.13 | .07 | [-.27, .01] | -1.95 | .05 | .06 | .06 | [-.07, .18] | .90 | .37 |
| Conservatism | .05 | .05 | [-.04, .15] | 1.15 | .25 | .05 | .04 | [-.04, .13] | 1.15 | .25 |

Note. Focal motivation variables are in bold.

(Appendix continues)

Table A5
Independent Effects of Mediators (in Bold) on Outcomes of Voting Secrecy (Study 1b)

| Predictor | Predicting feelings of personal authenticity | | | | | Predicting feelings of relational closeness | | | | | Predicting feelings of political regret | | | | |
|----------------|--|------------|---------------------|--------------|-----------------|---|------------|--------------------|-------------|------------|---|------------|--------------------|-------------|-------------|
| | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> |
| Mind wandering | -.20 | .05 | [-.30, -.10] | -4.01 | <.001 | -.04 | .05 | [-.14, .06] | -.77 | .44 | .11 | .03 | [.04, .17] | 3.30 | .001 |
| Concealment | -.05 | .05 | [-.16, .05] | -1.06 | .29 | .03 | .05 | [-.08, .13] | .50 | .62 | .04 | .03 | [-.03, .11] | 1.23 | .22 |
| Reputation | -.03 | .07 | [-.17, .10] | -.49 | .62 | -.04 | .07 | [-.18, .13] | -.51 | .61 | .09 | .05 | [-.01, .18] | 1.83 | .07 |
| Belonging | .05 | .07 | [-.08, .19] | .81 | .42 | .03 | .07 | [-.11, .16] | .40 | .69 | -.04 | .04 | [-.13, .05] | -.95 | .34 |
| Harmony | -.16 | .06 | [-.29, .03] | -2.51 | .01 | .24 | .07 | [.11, .37] | 3.61 | <.001 | -.07 | .03 | [-.16, .01] | -1.70 | .09 |
| Conservatism | -.06 | .05 | [-.15, .03] | -1.26 | .21 | -.08 | .05 | [-.17, .01] | -1.65 | .10 | -.10 | .03 | [-.16, -.04] | -3.40 | <.001 |

Note. Focal motivation variables are in bold.

Table A6
Independent Effects of Empirical Motivation Factors on Mind Wandering to and Concealing Secrets (Study 1a)

| Predictor | Predicting mind-wandering frequency | | | | | Predicting concealment frequency | | | | |
|----------------|-------------------------------------|------------|--------------------|--------------|-------------|----------------------------------|------------|--------------------|-------------|------------|
| | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> |
| Reputation | .38 | .10 | [.18, .57] | 3.79 | .002 | .05 | .08 | [-.12, .21] | .58 | .56 |
| Social network | -.09 | .06 | [-.21, .04] | -1.36 | .17 | .13 | .05 | [.02, .23] | 2.41 | .02 |
| Conflict | .08 | .07 | [-.07, .22] | 1.05 | .29 | -.03 | .06 | [-.15, .09] | -.54 | .59 |
| Conservatism | -.004 | .07 | [-.14, .14] | -.05 | .96 | .02 | .06 | [-.09, .14] | .37 | .72 |
| Concealment | .51 | .05 | [.41, .61] | 10.07 | <.001 | | | | | |
| Mind wandering | | | | | | .35 | .03 | [.28, .42] | 10.06 | <.001 |

Note. Focal motivation variables are in bold.

Table A7
Independent Effects of Empirical Motivation Factors on Mind Wandering to and Concealing Secrets (Study 1b)

| Predictor | Predicting mind-wandering frequency | | | | | Predicting concealment frequency | | | | |
|----------------|-------------------------------------|------------|--------------------|--------------|-----------------|----------------------------------|------------|--------------------|-------------|------------|
| | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> |
| Reputation | .22 | .05 | [.11, .32] | 3.99 | <.001 | .04 | .05 | [-.06, .15] | .84 | .40 |
| Social network | .03 | .04 | [-.05, .10] | .72 | .47 | .04 | .04 | [-.03, .12] | 1.15 | .25 |
| Conflict | -.05 | .04 | [-.13, .03] | -1.11 | .27 | -.04 | .04 | [-.12, .04] | -.95 | .34 |
| Conservatism | -.14 | .04 | [-.22, -.06] | -3.27 | .001 | .05 | .04 | [-.03, .14] | 1.25 | .21 |
| Concealment | .45 | .04 | [.37, .72] | 10.30 | <.001 | | | | | |
| Mind wandering | | | | | | .43 | .04 | [.35, .51] | 10.30 | <.001 |

Note. Focal motivation variables are in bold.

(Appendix continues)

Table A8

Independent Effects of Mediators (in Bold) on Outcomes of Voting Secrecy (Study 1a)

| Predictor | Predicting feelings of personal authenticity | | | | | Predicting feelings of relational closeness | | | | |
|----------------|--|------------|---------------------|--------------|-----------------|---|------------|--------------------|--------------|------------|
| | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> |
| Mind wandering | -.11 | .03 | [-.17, -.05] | -3.65 | <.001 | .07 | .03 | [.02, .13] | 2.60 | .01 |
| Concealment | -.03 | .04 | [-.10, .04] | -.75 | .45 | -.03 | .03 | [-.10, .03] | -1.00 | .32 |
| Reputation | -.14 | .07 | [-.27, -.01] | -2.08 | .04 | .06 | .06 | [-.05, .18] | 1.07 | .29 |
| Social Network | -.04 | .04 | [-.12, .04] | -.90 | .37 | -.02 | .04 | [-.10, .06] | -.53 | .60 |
| Conflict | -.07 | .05 | [-.16, .02] | -1.45 | .15 | .05 | .04 | [-.03, .14] | 1.20 | .23 |
| Conservatism | .06 | .05 | [-.04, .15] | 1.21 | .23 | .05 | .04 | [-.03, .14] | 1.17 | .24 |

Note. Focal motivation variables are in bold.

Table A9

Independent Effects of Mediators (in Bold) on Outcomes of Voting Secrecy (Study 1b)

| Predictor | Predicting feelings of personal authenticity | | | | | Predicting feelings of relational closeness | | | | | Predicting feelings of political regret | | | | |
|----------------|--|------------|---------------------|--------------|-----------------|---|------------|--------------------|-------------|------------|---|------------|--------------------|-------------|-----------------|
| | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>p</i> |
| Mind wandering | -.19 | .05 | [-.29, -.09] | -3.81 | <.001 | -.04 | .05 | [-.14, .06] | -.83 | .41 | .11 | .03 | [.05, .18] | 3.43 | <.001 |
| Concealment | -.05 | .05 | [-.15, .05] | -.99 | .32 | .03 | .05 | [-.07, .13] | .56 | .58 | .04 | .03 | [-.03, .1] | 1.13 | .26 |
| Reputation | -.15 | .06 | [-.27, -.04] | -2.65 | .01 | .11 | .06 | [-.01, .22] | 1.76 | .08 | -.02 | .04 | [-.10, .05] | -.57 | .57 |
| Social network | .06 | .04 | [-.02, .14] | 1.44 | .15 | -.01 | .04 | [-.09, .07] | -.20 | .84 | .02 | .03 | [-.03, .07] | .74 | .46 |
| Conflict | -.03 | .04 | [-.11, .06] | -.62 | .54 | .12 | .04 | [.04, .21] | 2.80 | .01 | -.01 | .03 | [-.07, .04] | -.47 | .64 |
| Conservatism | -.05 | .05 | [-.14, .04] | -1.02 | .31 | -.08 | .05 | [-.17, .01] | -1.74 | .08 | -.09 | .03 | [-.15, -.03] | -3.05 | .002 |

Note. Focal motivation variables are in bold.

Received December 31, 2018
Revision received February 26, 2019
Accepted March 8, 2019 ■