Who Needs Privacy?

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Abstract

Objective: This study analyzes how personality relates to peoples' desire for privacy. Specifically, we investigated whether the syllogism "I don't mind surveillance because I have nothing to hide" is correct: Do people who lack integrity (given they have something to hide) indeed desire more privacy?

Method: Study 1 featured an online questionnaire ($N = 268$, $M_{\text{age}} = 20$ years, 72% female) and Study 2 a laboratory experiment ($N = 87$, $M_{\text{age}} = 20$ years, 51% female), where participants wrote an essay about past negative, positive, or neutral behaviors to analyze effects on desire for privacy.

Results: Study 1 showed that respondents who are more shy, less anxious, and more risk averse desired more privacy. Respondents who self-reported lacking integrity reported desiring more privacy from government and more anonymity. Study 2 replicated these results and showed a statistical trend ($p = .052$) that writing about negative past behaviors increased desire for interpersonal privacy. Moreover, the integrity IAT showed significant relations with desire for privacy from government.

Conclusion: It is possible to predict peoples' desire for privacy based on their lack of integrity. However, other neutral personality facets also explain desire for privacy. Hence, putting everyone who desires privacy under general suspicion would be incorrect.

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Who Needs Privacy?

In his novel *The Circle*, (**???**) describes a dystopian society in which people are gradually forfeiting their privacy. People decide to become "transparent", which means that they start carrying a small camera around the neck in order to broadcast their daily lives to the Internet. Eventually, this causes a societal upheaval: "The pressure on those who hadn't gone transparent went from polite to oppressive. The question, from pundits and constituents, was obvious and loud: If you aren't transparent, what are you hiding?" (**???**). The main argument being offered to justify the surveillance is: "If you have nothing to hide, you have nothing to fear." This syllogism is familiar, given that it commonly appears in also nonfictional conversations (**???**). Consider, for example, the following tweet: "I don't download illegally. I don't have anything on my comp[uter] to hide. Hell, I'm sure the #NSA gave up on me years ago." (**???**).

Why do people desire privacy? To date there is only little research on why people desire privacy and how the desire for privacy can be predicted by aspects of personality. For example, and to the best of our knowledge, so far no study exists that has analyzed the nothing-to-hide argument from a scientific and empirical perspective. Why do some people not care whether government agencies such as the NSA are collecting their data (**???**), and why do others protest vehemently in order to protect their privacy?

Answering this question is important: Given that government agencies are collecting large amounts of data hoping to reduce criminality and terrorism, and given that government agencies are collecting this data preemptively and without concrete suspicions, it is relevant to find out whether this practice of mass surveillance can be justified based on the nothing-to-hide argument. As a result, the main question of this paper is: Do people who desire more privacy really have more to hide and, more generally, what are personality facets that determine peoples' overall desire for privacy?

Desire for Privacy

Privacy captures the extent of voluntary withdrawal from others (Westin, 1967). Several models suggest that privacy is a multi-dimensional concept: For example, in a theory-driven treatise (**???**) argued that privacy has four dimensions: informational, social, psychological, and physical privacy. Pedersen (1979), by contrast, did an empirical factor analysis (initially starting with 94 items) and suggested that privacy exists on six dimensions: reserve, isolation, solitude, intimacy with friends, intimacy with family, and anonymity. In addition, Schwartz (1968) differentiated between horizontal and vertical privacy: Whereas horizontal privacy captures withdrawal from peers, vertical privacy refers to withdrawal from superiors or institutions (e.g., government agencies). Next to being multi-dimensional, privacy is also contingent (Dienlin, 2014): One can, for example, distinguish between the objective privacy context, the subsequent subjective perception of privacy, the psychological desire for privacy (which is both a situational and dispositional need), and the resulting privacy behavior (as represented by self-disclosure). For the purpose of this study, we combine the aforementioned theories and focus on (a) vertical privacy with regard to the desire for withdrawal from government surveillance, (b) horizontal privacy in terms of the desire for withdrawal from peers, friends, or acquaintances, and (c) both horizontal and vertical privacy as captured by the general desire for anonymity.

The relation between integrity and desire for privacy. Which specific aspects of personality help predict desire for privacy? At its core, the nothing-to-hide argument implies that lack of integrity is an important predictor of why people desire privacy. This becomes especially apparent when we consider the definition of Solove's (2007) nothing-to-hide argument (notably, Solove is a strong critic of the nothing-to-hide argument):

> The NSA surveillance, data mining, or other government information gathering programs will result in the disclosure of particular pieces of information to a few government officials, or perhaps only to government computers. This very limited disclosure of the particular information involved is not likely to be threatening to the privacy of law-abiding

citizens. Only those who are engaged in illegal activities have a reason to hide this information. [(**???**); p. 753]

This definition helps illustrate the link between lack of integrity and desire for privacy: People who have "engaged in illegal activities" can be considered, by definition, to lack integrity (**???**), which is why they have a reason "to hide this information" (or, in other words, to desire more privacy). In terms of a scientific definition of integrity there is no real consensus, however most scholars agree that integrity "incorporates a tendency to comply with social norms, avoid deviant behavior, and embrace a sense of justice, truthfulness, and fairness" [(**???**); p. 82].

Several theoretical arguments exist why lack of integrity might correlate with desire for privacy. In general, any self-disclosure is a potential risk because others might disagree, disapprove, or misuse the information in other contexts (**???**). Privacy regulation theory showed that if self-disclosures are too risky, people raise their desired level of privacy, intensify their boundary regulation, and employ more mechanisms to seclude and protect themselves (**???**). In traditional contexts, this could range from moderate behaviors like closing doors, to extreme behaviors such as physically tossing someone out of the room (**???**). In modern contexts, protecting one's privacy can mean to avoid photographs or to deliberately shun public places that have surveillance cameras. People who have actually committed something bad, treacherous, or illegal become even more vulnerable and face a significant risk of self-disclosure, because others will surely disapprove of these activities (**???**). Hence, the foregoing arguments illuminate an indirect link between integrity and desire for privacy: By definition, people who participate in negative activities are considered to lack integrity (**???**). People who have engaged in negative activities have, by definition, more to hide, and disclosures concerning those activities pose a high risk. Because of this increased risk, people will arguably desire more privacy, as a means to mitigate their felt risk (**???**). In this way, the current research extends Altman's privacy regulation theory (1976) by suggesting that lack of integrity is an important yet unexamined factor that could

increase peoples' desired level of privacy.

A few studies can be found that imply a relation between privacy and integrity. For example, several studies found that surveillance reduces cheating behaviors (**???**, Covey.1989). (**???**) asked students to solve an impossible maze. In the high surveillance condition, the experimenter stood in front of the students and closely monitored their behavior. In the low surveillance condition, the experimenter stood behind the students, did not monitor their behavior, and visual dividers were used to block the experimenter's view of the students. Results showed that students were more likely to cheat in the low surveillance condition, suggesting that in situations of surveillance (i.e., less privacy), people show fewer cheating behaviors (i.e., more integrity). Similarly, people are more likely to prevent others from stealing when security cameras are visible (**???**), which is also a sign of higher integrity. Next, in a longitudinal sample with 457 respondents in Germany (**???**), people who reported needing more privacy were less satisfied with their lives (r = -.47), had more (r = .41) and less positive affect (r = -.39). More importantly however, people who felt they needed more privacy were also less authentic on their SNSs profiles (r = -.48) and less authentic in their personal relationships (r = -.28; **???**). For example, people who agreed to items like "I do not talk about personal issues unless my conversation partner brings them up first" were more likely to report that their online profiles did not truly represent their personality. Given the argument that authenticity is a subset of integrity (**???**), we reason that the concept of integrity might relate to the desired level of privacy. Finally, Pedersen (1982) showed that three dimensions of need for privacy related to self-esteem: In his study with N = 70 undergraduate students, respondents who held a lower self-esteem were more reserved (r = .29), needed more anonymity (r = .21) and preferred solitude (r = .24). Granted, self-esteem and integrity are generally distinct concepts; however, Pedersen's specific operationalization of self-esteem integrated several aspects of integrity (e.g., by using items such as "moral, nice, fair, unselfish, good, honest, reputable, sane" to measure self-esteem). Thus, our overarching hypothesis is that people who lack integrity have a greater desire for privacy.

In Study 1, we used a questionnaire-based design to analyze how lack of integrity and other personality facets relate to desire for privacy. In accordance with the reasoning mentioned above, we suggest that people with less integrity feel a greater desire for privacy. Specifically, we argue that integrity may relate to the desire for privacy from (a) government surveillance, as governments have the legitimate power to prosecute illegal activities. Next, we hypothesize that integrity relates to the desire privacy for (b) anonymity. Anonymity makes it more difficult for both legal and social agents to identify and address potential wrongdoers, which is why people with less integrity will prefer situations in which they are anonymous. Finally, lack of integrity likely also relates to an increased desire for privacy from (c) other people, as most other people will disapprove of immoral or illegal activities, and might reveal those activities to authorities.

Hypothesis 1: People who feel lower in self-perceived integrity desire more privacy from government surveillance (H1a), more anonymity (H1b), and more privacy from other persons (H1c).

Shyness. Critics of the nothing-to-hide argument hold that people who desire privacy should not automatically be confronted with suspicion, and that privacy has several purposes that are not related to criminal behavior (**???**). Westin (1967), for example, defined four primary purposes of privacy: (1) self-development (i.e., the integration of experiences into meaningful patterns), (2) autonomy (i.e., the desire to avoid being manipulated and dominated), (3) emotional release (i.e., the release of tension from social role demands), and (4) protected communication (i.e., the ability to foster intimate relationships). These are all important social factors for which people desire privacy. Hence, the argument is that people who desire privacy can have several legitimate reasons for doing so; reasons which are essential for psychosocial wellbeing and which relate to different factors of personality. Below, we thus explore other (neutral) aspects of personality that potentially predict desire for privacy. In order to be more precise, we follow the advice by Paunonen and Ashton (2001) and, instead of using generic personality factors as predictors, refer to specific

personality facets.

First, we argue that people who are more reserved, who feel less comfortable in social situations, generally desire more anonymity and more interpersonal privacy. Given that privacy is, by definition, a voluntary withdrawal from society (Westin, 1967), we expect that people who are more reserved or more shy desire more privacy from others. Several empirical studies support this hypothesis: Extroverted people desire less privacy (**???**), people who describe themselves as introverted thinkers are more likely to prefer social isolation (Pedersen, 1982), and introverted people are more likely to report invasions of privacy (**???**). Finally, we did not find convincing theoretical and empirical arguments for why shyness should relate to an increased desire for privacy from government surveillance, which is why we did not include a hypothesis on this relation.

Hypothesis 2: People who are more shy desire more anonymity (H2a) and more privacy from other persons (H2b).

Anxiety. Of course, there are also reasons why people might desire less privacy. Government agencies often curtail privacy with the aim to prevent crime: For example, the NSA's surveillance programs are often considered a direct response to the 9 / 11 terrorists attacks (**???**). It seems plausible that people who are more afraid of terrorist attacks are also more likely to consent to these surveillance programs, given that these programs promise to reduce the likelihood of future attacks. One can then argue that people who are afraid of terrorist attacks are also more afraid of threats overall, which is why we suggest that people who are, in general, more anxious desire less privacy from government surveillance and less anonymity. We did not include a hypothesis on the potential relation between anxiety and desire for interpersonal privacy. On the one hand, one could argue that people who are more anxious are more reserved, given that social interactions can pose significant risks (especially with strangers or weak ties; **???**). At the same time, one could suggest that especially those people who are more anxious desire less privacy from others (and especially their strong ties), in order to cope better with their daily challenges. At the end, given that we measure

interpersonal privacy on a general level (and do not distinguish between desire for privacy from (a) weak ties and (b) strong ties), it seems plausible that both effects could cancel each other out.

Hypothesis 3: People who are more anxious desire less privacy from government surveillance (H3a) and more anonymity (H3b).

Risk aversion. Disclosing personal information always poses a certain risk, given that others can misuse self-disclosed personal information in different contexts, which can lead to severe consequences (**???**). Not everyone will feel intimidated by this hypothetical threat—except those who have a general tendency to avoid taking unnecessary risks. The most cautious strategy to minimize risks of personal self-disclosures would be, arguably, to keep as much information as possible private. Hence, we suggest that people who are, in general, more risk averse have a good reason to desire more privacy in all three aforementioned contexts.

Hypothesis 4: People who are more risk averse desire more privacy from government surveillance (H4a), more anonymity (H4b), and more privacy from other persons (H4c).

Traditionality. The personal computer and the Internet have rendered the world increasingly digitized: Social interactions, purchases, and medical treatments nowadays all produce digital traces, which can be combined into accurate latent user profiles. Given the features of digital information (i.e., information is persistent, searchable, reproducible, and scalable; **???**), this allows for unprecedented ways and degrees of surveillance. Mark Zuckerberg famously observed that privacy is no longer a "social norm," rather that people share personal information (**???**). Hence, in order to be part of contemporary life (e.g., by using SNSs), it seems necessary to give up some privacy. However, arguably not everyone is willing to pay that price, and especially people who are more conservative might prefer to stick to their usual routines and decide against giving up their privacy. This is supported by empirical research: Older people, who are generally less open and more traditional (**???**), are more concerned about their privacy than younger people (**???**). Taken together, we suggest

that people who are more traditional also desire more privacy in all three aforementioned contexts.

Hypothesis 5: People who are more traditional desire more privacy from government surveillance (H5a), more anonymity (H5b), and more privacy from other persons (H5c).

Methods

We report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study.

Procedure and participants

Participants were students from a university in the western U.S. who received course credit for taking part in the study. The sample consisted of $N = 296$ respondents, with an age that ranged from 18 to 56 years ($M = 20$ years). 72% of the respondents were female. The median participation time was 24 minutes. Regarding ethnicity, 37% of the respondents were Non-Hispanic White / Caucasian, 4% Black / African American, 21% Hispanic / Latino, 24% Asian / Pacific Islander, 0% Native American, 5% others, and 8% nonresponse.

Measures

Despite the fact that we mostly used well-established scales, confirmatory factor analyses (CFAs) showed that some of the original items had to be deleted in order to achieve adequate factorial validity. The final scales showed acceptable fit (CFI >.90, TLI >.90, RMSEA <.10, SRMR <.10), good composite reliability (REL(ω) >.60), and adequate convergent factorial validity (AVE >.50; see Table **??**). Respondents answered all items on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

The data, all items (including deleted ones), results of CFAs, item statistics, and distribution plots can be found in the online supplementary material.[1]

[1] https://osf.io/7ncpk/?view_only=38283fd9262646378e4ba1e19c9d707f}}

Desire for privacy. We measured desire for privacy on three dimensions: (a) Desire for privacy from government surveillance, which represents the extent to which people want the government to abstain from collecting information about their personal life. One example item is “I feel the need to protect my privacy from government agencies.” (b) Desire for anonymity, which measures the extent to which people feel the need to avoid identification(“I need to be able to use a fake name on social network sites to preserve my privacy}). (c) Desire for privacy from other people, which measures the extent to which people want to withhold personal information from others(”I don’t feel the need to tell my friends all my secrets}). For each dimension, we used 3 self-developed items that build on prior studies (**???**).

Integrity. Integrity measures the extent to which people comply with social norms and values. When measuring integrity, the question arises whether it is possible to measure integrity based on self-reports. Interestingly, integrity tests that are based on self-reports have been shown to work successfully, given that they can predict unwanted professional workplace behavior sufficiently (e.g., theft, drug and alcohol problems, or absenteeism; **???**). In order to measure lack of integrity, we thus used 4 items of the subscale integrity of the Supernumerary Personality Inventory (**???**). An example item is “I don’t think there’s anything wrong with cheating a little on one’s income tax forms.”

Shyness. Shyness captures whether people prefer to spend their time alone or in company. We measured shyness with 4 items of the inverted extraversion subscale gregariousness (**???**). An example item is "I shy away from crowds of people.}

Anxiety. Anxiety measures whether people are afraid of negative external influences. We measured anxiety with 4 items of the neuroticism subscale anxiety (**???**). An example item is "I am easily frightened.}

Risk avoidance. Risk avoidance captures whether people abstain from taking risks. We measured risk avoidance with 4 items of the conscientiousness subscale deliberation (**???**). An example item is "I think twice before I answer a question.}

Traditionalism. Traditionalism measures whether people prefer to stick with their usual routines. We measured traditionalism with 4 items of the inverted openness to experiences subscale actions (**???**). An example item is "I'm pretty set in my ways.}

Data analyses

All hypotheses were tested with structural equation modeling (SEM). To assess the SEM assumption of multivariate normality, we computed a multivariate Shapiro-Wilk normality test. The results showed a violation of multivariate normality ($W = 0.90$, $p < .001$), which is why we used the more robust Satorra-Bentler scaled test statistic as estimator. We treated missing data with casewise deletion and tested all hypotheses with a two-tailed p $< .050$ significance level; values between $p = .050$ and $p = .010$ were considered trends toward significance. Regarding effect sizes, we classified regression coefficients with values exceeding $\beta = .10$ as small effects, $\beta = .30$ as medium effects, and $\beta = .50$ as large effects.

Unfortunately, we did not determine sample size based on a priori power analyses. We decided against including social desirability as a control variable, because even though social desirability can affect answers to sensitive questions (**???**), it is more likely to reflect a true personality trait than false answering behavior (**???**). Likewise, we did not include demographic control variables such as age or education, because we used a typical student sample with little demographic variance. We used R (Version 3.5.1; R Core Team, 2018) for all our analyses.

Results

Discussion

The results of Study 1 showed that integrity relates to several dimensions of desire for privacy: People who reported being of lower integrity desired more privacy from government and more anonymity. In other words, people who agreed that there would be nothing wrong with cheating a little or lying occasionally were also more likely to agree that the government

should not invade peoples' privacy, even if that could help to prevent terrorist attacks. Likewise, people who said, for example, that they would feel tempted to take things that do not belong to them were also more likely to avoid situations in which they were identifiable.

In addition, desire for privacy was predicted also by other (neutral) personality facets: People who were more shy, more risk averse, and less anxious also desired more privacy. This implies that next to lack of integrity there are various other personality-related aspects that predict desire for privacy.

People who are more shy, more risk averse, or less anxious also desire more privacy. For example, people who are less anxious are less likely to accept government surveillance (arguably because they are less afraid of terrorist attacks). When looking at the bigger implications of the results, this shows the importance to make differentiated claims on why people desire privacy: Indeed, the results suggest that some people desire privacy because they might have something to hide. However, putting everyone who desires privacy under a general suspicion is wrong given that shy, risk averse, and less anxious people are also more likely to desire privacy.

In conclusion, our results follow (**???**), who reasoned that if exposure of information is risky it is likely that people will use more mechanisms to strengthen their social boundaries and increase their desired level of privacy. This study thus aligns with Altman's privacy regulation theory by showing that, in several contexts, people with lower integrity had a higher level of desired privacy.

Limitations and future perspective

In our analysis of predictors of privacy, we followed the recommendation by Paunonen and Ashton (2001) and did not analyze broad factors of personality (e.g., neuroticism); instead, we focused on more specific personality facets (e.g., fearfulness). For future research, we suggest going one step further by analyzing predictors that are even more specified. For example, it seems possible that people who hold dissenting political beliefs could also have a

higher desire for privacy from the government. Similarly, it would be interesting to focus on different minority groups. For example, it seems plausible that people from a LGBT background might desire more privacy from government (because it is potentially repressive or unfriendly toward LGBTs). Finally, in this study we focused mostly on escapist motives for why people desire privacy (e.g., shyness, risk aversion). Interestingly, (**???**) were able to show that when predicting engagement in solitary activities, it is less preferable to measure how strongly people want to escape society (avoidance oriented), but rather how much they seek solitude (approach oriented). Hence, future studies might want to include predictors that are more approach oriented (e.g., peoples' desire for contemplation).

From a methodological perspective, future research should continue to improve the instruments we used, given that factorial validity of some scales was only moderate. Similarly, we recommend elaborating on the general understanding of integrity as a theoretical concept. To date, there is not one overarching concept of integrity that incorporates all the different aspects of integrity, yet it would be valuable to examine how other aspects of integrity (e.g., authenticity, trustworthiness, or consistency) relate to privacy desires.

Power analyses showed that future research should use samples above $N \approx 260$ in order to test hypotheses with the recommended power of at least .80 (Cohen, 1992).

In general, the question arises whether it is possible, or even socially desirable, to measure a person's integrity. On the one hand, integrity implies absolute criteria: Stealing is bad and forbidden, whereas helping is good and encouraged. On the other hand, integrity implies relative criteria: Whereas some cultures disapprove of lying whatever the context, others consider lying okay—for example "white lies" in order to save face or to avoid hurting someone's feelings (**???**). Thus, ranking behaviors, opinions, and character traits with regard to integrity is a moral dilemma. As a result, throughout the entire study we have understood integrity as a transgression of social norms that is strong and that most societies would agree upon (for example, most societies would consider stealing as a sign of low integrity).

As a final note, we measured integrity based on self-ratings. One can criticize this

approach by saying it is not possible to measure integrity based on self-reports because of social desirability influences. However, self-reports of integrity can indeed predict malevolent behavior: In a meta-analysis with 665 correlation coefficients, integrity tests related to counterproductive behaviors with a coefficient of $r = .47$ (**???**). Nonetheless, future research would benefit from including behavioral manifestations of integrity, such as concrete cheating behaviors. If concrete cheating behaviors also increase desires for privacy, this would strengthen the underlying premise of the nothing-to-hide argument.

Conclusion

References

Dienlin, T. (2014). The privacy process model. In S. Garnett, S. Halft, M. Herz, & J. M. Mönig (Eds.), *Medien und Privatheit* (pp. 105–122). Passau, Germany: Karl Stutz.

Paunonen, S. V., & Ashton, M. C. (2001). Big Five factors and facets and the prediction of behavior. *Journal of Personality and Social Psychology*, *81*(3), 524–539. doi:10.1037/0022-3514.81.3.524

Pedersen, D. M. (1979). Dimensions of privacy. *Perceptual and Motor Skills*, *48*(3), 1291–1297. doi:10.2466/pms.1979.48.3c.1291

Pedersen, D. M. (1982). Personality correlates of privacy. *The Journal of Psychology*, *112*(1), 11–14. doi:10.1080/00223980.1982.9923528

R Core Team. (2018). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from https://www.R-project.org/

Schwartz, B. (1968). The social psychology of privacy. *American Journal of Sociology*, *73*(6), 741–752.

Westin, A. F. (1967). *Privacy and freedom*. New York, NY: Atheneum.