



Antecedents of bullshitting

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ABSTRACT

Although it appears to be a common social behavior, very little is known about the nature of bullshitting (i.e., communicating with little to no regard for evidence, established knowledge, or truth; Frankfurt, 1986) and the social conditions under which it is most likely to occur. The current investigation examines specific antecedents of bullshitting, particularly examining topic knowledge, evidence for or against an *obligation to provide an opinion hypothesis*, and an *ease of passing bullshit hypothesis*. Experiment 1 suggests that bullshitting is augmented only when both the social expectations to have an opinion, and the cues to show concern for evidence, are weak. Experiment 2 demonstrates that bullshitting can also be attenuated under conditions of social accountability. Results are discussed in light of social perception, attitude change, and new directions aimed at reducing the unwanted effects of bullshitting.

1. Introduction

Bullshitting (i.e., communicating with little to no concern for evidence or truth; Frankfurt, 1986) appears to be an inevitable social behavior and a salient feature of our culture. Initial empirical evidence suggests that bullshit-based content can sometimes be misperceived as something profound (Pennycook, Cheyne, Barr, Koehler, & Fugelsang, 2015; Pfattheicher & Schindler, 2016; Sterling, Jost, & Pennycook, 2016). Additional empirical evidence suggests that bullshitting can have important social consequences and utilities; particularly, bullshit is found to be evaluated less negatively than lying and can be used as a successful persuasion tactic (Petrocelli, 2018). However, very little empirical knowledge exists about the behavior of bullshitting and the antecedents of bullshitting remain unidentified.

Bullshitting appears to be a common social activity (Spicer, 2013) and there is a constant struggle against it (Cohen, 2002; Crockett, Dhar, & Mayyasi, 2014; Law, 2011; Penny, 2005). An understanding of the conditions under which bullshitting occurs is critical to the discovery of methods of attenuating the behavior and/or defending against it. The current investigation stands as the first empirical analysis designed to identify the social antecedents of bullshitting behavior.

1.1. A definition of bullshitting

Consistent with Frankfurt's (1986) conceptualization, *bullshitting* is defined here as communications that result from little to no concern for truth, evidence and/or established semantic, logical, systemic, or empirical knowledge.² When people intentionally or unintentionally express ideas or information in ways that are disconnected from a concern for evidence or established knowledge, they are in essence bullshitting. Importantly, Frankfurt (1986) suggested that people often feel an implicit responsibility or obligation to hold and/or express an informed opinion about almost everything. In fact, it is well established that people are perfectly willing to offer judgments and opinions about that which they could not possibly know anything about (e.g., Herr, Sherman, & Fazio, 1983). However, people cannot possibly have an informed opinion about everything and holding all communication to the standard of verifiable evidence is a seemingly unreasonable standard. Construing society as one that demands of everyone an informed opinion about everything may inadvertently promote bullshitting. In any case, the social norms of feeling obligated to have an opinion about everything, and a willingness to express opinions without any concern for evidence in support of those views, position bullshitting as a common social activity. Given that bullshitting is almost unavoidable, and therefore a common social activity (Allen, Allen, & McGoun, 2012;

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² Bullshitting may also refer to a lack of concern for "truth". However, truth is pluralistic (i.e., a system of thought that recognizes more than one ultimate principle and/or a diversity of ideas; Horwich, 2010; Künne, 2003; Lynch, 2009; Pedersen & Wright, 2013). In fact, philosophers (Bernal, 2006; Preti, 2006; Reisch, 2006) speculate that bullshitters often believe their own bullshit; that is, the bullshitter believes what he/she says is true (Bernal, 2006; Preti, 2006; Reisch, 2006). The problem with bullshitting then lies in the fact that bullshit represents a distorted view of the truth, lacking in concern or consideration for evidence or established knowledge (also see Allen et al., 2012; Morgan, 2010; Spicer, 2013).

Frankfurt, 1986; Morgan, 2010; Spicer, 2013), it is surprising that little empirical knowledge about the behavior exists.

In his theory of bullshit, Frankfurt (1986) outlined several propositions of the behavior of bullshitting, many of which have been generally accepted by analytical philosophers (Aberdein, 2006; Hardcastle, 2006; Kimbrough, 2006; Law, 2011; Maes & Schaubroeck, 2006); although some have proposed alternative types of bullshitting (see: Cohen, 2002; Reisch, 2006) that do not lend as easily to empirical investigation. As defined here, bullshitting is not determined by the content of what people communicate. That is, bullshitting has more to do with *how* people communicate (i.e., the underlying concern for evidence/established knowledge and the manner in which they promote and defend claims) and less to do with *what* is communicated (Law, 2011).³ Communicating any claim, such as “Pluto is a planet in our solar system.”, can be done without any concern for evidence or knowledge or it can be done with such concern. The former is considered bullshit, but the latter is not. In essence, the bullshitter is a relatively careless thinker/communicator and plays fast and loose with ideas and/or information as he bypasses consideration of, or concern for, evidence and established knowledge.

Perhaps the most extreme example of bullshit is captured by Pennycook et al.'s (2015) Bullshit Receptivity (BSR) scale. Using a computerized algorithm and a list of words (some of them profound-sounding), the BSR scale is composed of randomly constructed statements containing appropriate syntactic structure. One is example is “Imagination is inside exponential space time events.” (Pennycook et al., 2015, p. 552). By definition, such a statement is entirely bullshit because it is an assortment of words with absolutely no concern for, or basis in, truth. As Pennycook et al. noted, bullshit is distinct from mere nonsense as it implies, but does not contain, adequate meaning or truth.

Bullshitting is also not the same as lying.^{4,5} As Frankfurt (1986) argued, the liar knows the truth and communicates with respect to the goal of detracting others from the truth. On the other hand, the bullshitter has no regard for evidence in support of what he/she believes to be true. In fact, what the bullshitter communicates may be true, but the bullshitter wouldn't know whether or not he/she is communicating the truth. The bullshitter doesn't care what the truth actually is, and he/she

³ The notion of *how* one communicates with respect or lack thereof for evidence and/or truth is consistent with Frankfurt's (1986) definition of bullshit, whereas the notion of *what* is communicated is consistent with Cohen's (2002) unique definition. Cohen defined bullshit as obscure output or semantic content that is cannot be clarified or unobscured. That is, any particular claim could be deemed bullshit, in and of itself. However, that which is considered nonsense or truth is pluralistic. According to the definition employed in the current research, bullshitting is an activity with an indifference to an important element of sound judgment and reasoning (e.g., evidence, established knowledge, truth), not necessarily de facto claims about whether particular communicative content is and is not bullshit. Treating the behavior of bullshitting as a way of communicating escapes the epistemological quandaries that Cohen's definition of bullshit is subject to. In fact, Dalton (2016) raised this very concern, arguing that any statement could, in fact, be subjectively profound and contain elements of insight and wisdom.

⁴ Bullshitting is also distinct from propaganda. Propaganda is form of communication, often used by political campaigners, sales agents, advertisers, and others aimed toward influencing the attitude of a population toward some cause or position. Used to further an agenda, propaganda is often characterized by playing to emotions by appealing to fears, popular desires, prejudices, and irrational hopes, rather than by using rational argument, creating a rather distorted vision of the world (Jowett, 1987; Petty, Wells, & Brock, 1976; Pratkanis & Aronson, 2001; Sussman, 2011). Similar to the liar, the propagator is aware of the truth and frames or distorts the truth to further his/her agenda by influencing the attitudes of others. The bullshitter, on the other hand, is not concerned with truth and is not using it as a tool of mass persuasion. In fact, as Frankfurt (1986) surmised, sometimes one is compelled to bullshit in order to test out the reactions of those around them or to feel what it is like to say such bullshit. Although propaganda could conceivably involve bullshit, not all bullshit is propaganda.

⁵ The disregard for evidence, characteristic of the bullshitter, should not be confused with sociopathic behavior. The sociopath behaves without regard for society in general or its rules and laws, the rights of others. They also fail to feel remorse or guilt and have a tendency to display violent behavior (Mealey, 1995; Pemment, 2013). It is quite likely that sociopathic behavior will involve some degree of bullshitting, bullshitting in and of itself is not sociopathic.

isn't even trying to know or communicate the truth. One important commonality between bullshitting and lying is that both the bullshitter and liar alike appear genuine or as if they are concerned with the truth. Thus, in practice, for the receiver it is difficult to determine if one is bullshitting, lying, or telling the truth as he/she sees it.

Statements of one's own beliefs or opinions are not considered bullshit, as one's beliefs and opinions are self-evident; although one's belief or opinion itself might be based on bullshit. Offering an explanation, while simultaneously having little to no concern for verifiable evidence, is by definition bullshitting. In this case, one is also not lying; again, his/her explanation could be true. If he/she is explaining his/her belief based on what he/she counts as verifiable evidence, then he/she is not bullshitting. People frequently trust in explanation (and clear bullshit), and that may not be a bad thing where verifiable evidence is hard to come by. On the other hand, when making scientific claims, explanation does not count as evidence – evidence tends to be held to a higher standard to avoid bullshit claims and conclusions.

1.2. Social antecedents of bullshitting

1.2.1. Obligation to provide an opinion

The emergence of bullshitting behavior is likely to have something to do with the social conditions that support it, either by social norms and expectations or by those that make it easy to engage in. Frankfurt (1986) surmised: “Bullshit is unavoidable whenever circumstances require someone to talk without knowing what he is talking about. Thus the production of bullshit is stimulated whenever a person's obligations or opportunities to speak about some topic are more extensive than his knowledge of the facts that are relevant to that topic.” (p. 99). Thus, Frankfurt suggests that bullshitting is predicated on the assumption that people feel an obligation to have/provide an informed opinion about everything; people engage in bullshitting in order to express their “informed” opinions or “try out” what it feels like to express such opinions. Assuming that social obligations exist, an *obligation to provide an opinion hypothesis* is proposed here, such that people are especially likely to engage in bullshitting when it is clear that the social expectations to have an opinion are relatively great.

1.2.2. Knowledge

Frankfurt's (1986) assertions regarding obligations to provide an opinion also implicate knowledge. That is, bullshitting behavior should be increasingly attenuated as knowledge increases.

However, one perspective suggests that people may be especially likely to engage in bullshitting when they feel relatively knowledgeable about the topic of discussion. In fact, Paulhus, Harms, Bruce, and Lysy (2003) found that people are perfectly willing to report possessing knowledge, even about things that do not actually exist, as is the case in over-claiming. In such cases, people should have more to contribute than when they feel relatively unknowledgeable.⁶ On the other hand, Brem and Rips (2000) demonstrated that when people possess adequate knowledge about a topic they usually provide more evidence over that of explanation; greater awareness of topic relevant information appears to yield greater concern for multiple perspectives and evidence. Thus, when people feel unfamiliar with a topic they may be expected to increase their bullshitting activity; people who are actually familiar with a topic do not need to bullshit – they, as Brem and Rips demonstrated, are more aware of evidence and use it.

⁶ As a case in point, “Jaywalking” segments of *The Tonight Show with Jay Leno* and *Jimmy Kimmel Live!* often ask people, “on the street”, to report their thoughts about the “obvious”; things that the large majority (i.e., the “average” citizen) would be clearly expected to know (e.g., When was the Declaration of Independence adopted? What keeps the earth orbiting around the sun?). Interestingly, people appear to be perfectly willing to bullshit about things they clearly do not know anything about, as long it is sounds like something they should know about.

1.2.3. Ease of passing bullshit

Frankfurt (1986) also theorized that no matter how “...studiously and conscientiously the bullshitter proceeds, it remains true that he is also trying to get away with something.” (p. 87). As long as one isn't lying, people appear to be tolerant of his/her bullshit; as Frankfurt (1986) surmised, “We may seek to distance ourselves from bullshit, but we are more likely to turn away from it with an impatient or irritated shrug than with the sense of violation or outrage that lies often inspire.” (p. 95). Thus, an *ease of passing bullshit hypothesis* is proposed, such that people will engage in bullshitting when they anticipate ease in receiving a “social pass” of acceptance or tolerance for their communications. That is, bullshitting should be augmented when he/she expects others to tolerate communications characterized by little to no regard for how things really are. One context by which it should be judged easy to pass bullshit is that in which relatively few people appear to have an informed opinion. If most people do not appear to have an informed opinion (i.e., social expectations to have an informed opinion are weak), “getting away” with bullshit should be easy because most other people probably do not know what they are talking about either. Such reasoning is consistent with the phenomenon of the false consensus effect (overestimation of the extent to which others think the same way that he/she does) and its connection to overconfidence (see: Dawes & Mulford, 1996; Ross, Greene, & House, 1977). Again, one should feel more confident in receiving a social pass of acceptance for bullshitting when communicating about things that most other people know little about (or have weak opinions about).

The ease of passing bullshit hypothesis is also consistent with findings in communication research. For instance, speaking time is positively associated with dominance, lack of apprehension, leadership, expertise and knowledge (Allen & Bourhis, 1996; Berger, Conner, & Fisek, 1974; Berger, Fisek, Norman, & Zelditch, 1977; Mast, 2002). Thus, people may refrain from bullshitting when they believe it is unlikely to be accepted as a contribution to the discussion. For example, a novice is unlikely to bullshit an expert because the bullshitter will likely fail to receive a pass. Thus, there appears to be two possibilities with regard to the effect of the social expectation to have an opinion on bullshitting activity. Bullshitting should also be relatively prevalent when it is clear that the prevailing consensus is such that one need not be concerned with evidence. That is, when people are not required to express evidence-based thoughts, bullshitting should increase.

1.3. Overview of present research

The current investigation was designed to identify potential antecedents of bullshitting behavior. Consistent with “Frankfurtian” bullshit (Frankfurt, 1986), the individual/speaker is the ultimate authority as to whether or not he/she is concerned with evidence or existing knowledge in his/her communication with others. However, the degree to which people are readily able to recognize their own bullshit, and their willingness to report it, are uncertain. Thus, the current investigation was designed to not only identify specific social conditions under which self-perceived bullshitting is likely to emerge but to also demonstrate that people are able and willing to report the extent to which they engage in bullshitting behavior. Experiment 1 examines the roles of topic knowledge and evidence relevant to the obligation to provide an opinion and ease of passing bullshit hypotheses, by assessing bullshitting that emerges in response to contextual cues theoretically relevant to bullshitting behavior. Experiment 2 further examines the roles of social accountability and audience attitudes (i.e., matching or mismatching that of the speaker) in the production of bullshit.

2. Experiment 1

2.1. Knowledge, obligation to provide an opinion, and ease of passing bullshit

Experiment 1 was designed to explore the roles of knowledge, the obligation to have/express an opinion, and the relative ease passing bullshit in bullshitting behavior. Participants were led to believe that the study was designed to better understand the causal ascriptions that people assign to the behaviors of others. Half of the participants learned about the personality of the target individual whereas the other half of the participants learned about another person unrelated to the target of judgment. Subsequently, participants learned about a specific behavior of the target individual and were asked to explain the behavior in a thought-listing task. Participants were also led to believe that their thought-listings would be evaluated by coders who know the target individual very well or by coders who did not know the target individual at all. Importantly, half of the participants were informed that they were not obligated to write any thoughts whereas the other half of the participants were not provided with such instructions. To assess the degree of bullshitting behavior, participants then rated each thought they listed with respect to their level of concern for evidence when writing the thought.

As Frankfurt (1986) suggested, people may be especially likely to bullshit when they feel obligated to talk about something of which they know little to nothing about, and when they are trying to “get away with something”. If bullshitting behavior is consistent with the *obligation to provide an opinion hypothesis*, relatively greater bullshitting behavior should be reported under the conditions in which people are obligated to provide an opinion (i.e., participants not informed that they are not obligated to write any thoughts) and relatively unknowledgeable; bullshitting should be relatively reduced under the conditions in which people are not obligated to provide an opinion and relatively knowledgeable. If bullshitting behavior is consistent with the *ease of passing bullshit hypothesis*, relatively greater bullshitting behavior should be reported when it would be reasonably easy to get away with it, that is, when one's thoughts are received by novices (i.e., among people who do not know anything about the target individual); bullshitting should be relatively reduced when receiving a social pass of tolerance for one's bullshit is not expected to be easy.

It is also possible that the anticipated ease of getting away with bullshit moderates the relationship between one's obligation to have/express an opinion and bullshitting behavior. Specifically, bullshitting behavior is expected to be attenuated most significantly when people do not feel obligated to have/express an opinion and they anticipate difficulty in getting away with bullshit (e.g., when thoughts are received/evaluated by others who much more knowledge about the topic of discussion).

2.2. Method

2.2.1. Participants and design

A total sample of 594 MTurk participants ($M_{\text{age}} = 37.97$ years, $SD = 12.22$, 320 females, 53.9%) were recruited to participate in exchange for \$1.00. A 2 (Participant Knowledge: unknowledgeable vs. knowledgeable) \times 2 (Obligation to Provide Opinion: no vs. yes) \times 2 (Audience Knowledge: unknowledgeable vs. knowledgeable) complete between-groups design was employed, whereby participants were randomly assigned to conditions. The dependent variables, Total Bullshitting and Proportion of Bullshitting, reflected the absence by which participants perceived the thoughts they wrote to be based on genuine evidence or existing knowledge. Sample size was determined based on the recommendations of statisticians (Simmons, Nelson, &

Simonsohn, 2013), who advocated using an $n = 50$ per condition as a rule of thumb. Accordingly, every attempt was made to get at least 50 participants per between-subjects condition of the design.⁷

2.2.2. Materials and procedure

All experimental materials were presented through a self-administered computer questionnaire using Inquisit 4.0 (Software, 2016). Participants advanced by clicking appropriate response keys.

2.2.2.1. Participant knowledge. Participants were led to believe that the study was designed to better understand the causal ascriptions that people assign to the behaviors of others and that they would be asked questions about the behavior of one or more individuals.

Participants assigned to the *knowledgeable* [unknowledgeable] condition were provided with the following instructions: “First, we would like to give you some information about a man named *Jim* [Tom]. Please take a few moments and learn about *Jim* [Tom]. *Jim* [Tom] completed a standardized, and commonly used, personality inventory. After the inventory was scored, *Jim* [Tom] received the following feedback:”. Participants were then provided with 13 statements originally used by Forer (1949) (e.g., “You have a great need for other people to like and admire you.”). Thus, half of the participants were relatively knowledgeable about Jim whereas the other half were not.

2.2.2.2. Thought-listing task. Next, *knowledgeable* [unknowledgeable] condition participants read the following: “Now we would like you to consider *Jim's behavior* [the behavior of another individual, Jim]. Jim was running for a seat on the City Council and he had a strong lead in some polls. One month before the election, Jim pulled out of the race altogether. We are interested in knowing your thoughts on Jim's decision. That is, why do you think Jim pulled out of the race?”

Participants were informed that in the next five screen frames they would be asked to list any thoughts you have with regard to Jim's decision to pull out of the City Council race. Take a moment to consider your opinions. Participants were instructed to type only one thought per box. It was also explained that it was okay to run out of thoughts, and to type “N/A” for any remaining thought-listing boxes.

2.2.2.3. Audience knowledge. Just before writing any thoughts, participants were randomly assigned to receive information about the level of knowledge that their audience (i.e., coders) had about the target (i.e., Jim). The *knowledgeable* [unknowledgeable] audience condition was informed of the following: “Please know that any and all thought-responses you may record will be scored for their accuracy by individuals who *happen to know Jim extremely well* [do not know anything at all about Jim].”

2.2.2.4. Obligation to provide opinion. Participants assigned to the condition obligated to provide opinion were given no additional instructions for the thought-listing task. However, participants assigned to the condition not obligated to provide opinion were given the following instructions: “Importantly, however, you are not at all obligated to share your thoughts.” These participants were then asked whether they would like to share their thoughts. If participants elected to share their thoughts, they proceeded to the thought-listing task. If participants elected to not share their thoughts, the remainder of the thought-listing task was skipped.

2.2.2.5. Thought-rating task. All thoughts listed by a participant from the thought-listing task was displayed, one at a time. Participants were asked to consider each thought, and respond to the following question:

⁷ All measures, manipulations, and exclusions in Experiments 1 and 2 have been disclosed, as well as the method of determining the final sample size. In each experiment, data were first collected and then analyzed; no data were collected after data analysis.

“When you wrote the thought (displayed below) with regard to Jim's decision to pull out of the city council race, to what degree would you say you were truly concerned with genuine evidence and/or established knowledge?” using an eleven-point scale with *not at all* (0) to *entirely* (10) as the anchor labels. Participants were instructed to click “N/A” if they did not write a thought for the entry.

2.3. Results

2.3.1. Total bullshitting

Total bullshitting was calculated by first subtracting each thought-rating task response from 10 (i.e., bullshitting is the lack of concern for evidence). All difference scores were then summed, resulting in a possible Total Bullshitting score of 0–50.

The Total Bullshitting data were subjected to a 2 (Participant Knowledge: unknowledgeable vs. knowledgeable) \times 2 (Obligation to Provide Opinion: no vs. yes) \times 2 (Audience Knowledge: unknowledgeable vs. knowledgeable) analysis of variance (ANOVA) test. The analysis yielded three statistically significant main effects. First, a significant main of Participant Knowledge emerged, $F(1, 586) = 7.92$, $p = .005$, $\eta^2 = 0.02$. Total bullshitting was significantly greater when participants were unknowledgeable ($M = 16.35$, $SD = 14.36$) than when they were knowledgeable ($M = 13.68$, $SD = 11.22$). Consistent with the obligation to provide an opinion hypothesis, a significant main effect of Obligation to Provide Opinion also emerged from the data, $F(1, 586) = 98.43$, $p < .001$, $\eta^2 = 0.14$. As expected, Total bullshitting was significantly greater when participants were obligated to provide an opinion ($M = 19.51$, $SD = 11.50$) than when they were not ($M = 10.03$, $SD = 12.36$). Finally, consistent with the ease of passing bullshit hypothesis, a significant main effect of Audience Knowledge emerged from the data, $F(1, 586) = 33.72$, $p < .001$, $\eta^2 = 0.05$. As expected, Total bullshitting was significantly greater when participants were led to believe their thoughts would be evaluated by unknowledgeable coders ($M = 17.68$, $SD = 13.32$) than when they were led to believe their thoughts would be evaluated by knowledgeable coders ($M = 12.30$, $SD = 11.78$); thus, when it was reasonable to expect passing bullshit to be relatively easy, more bullshitting was reported than when it was expected to be relatively difficult.

However, the significant main effects were qualified by an Obligation to Provide Opinion \times Audience Knowledge interaction, $F(1, 586) = 18.56$, $p < .001$, $\eta^2 = 0.03$ (see top panel of Fig. 1). Pairwise analysis showed that when participants were not obligated to provide an opinion, significantly greater bullshitting behavior was reported when they were led to believe that their thoughts would be evaluated by an unknowledgeable audience, $t(586) = 6.91$, $p < .001$. However, no such difference was observed when participants were obligated to provide an opinion, $t(586) = 0.97$, $p = .330$. From another angle, when participants were led to believe that their thoughts would be evaluated by an unknowledgeable audience, greater bullshitting behavior was reported when they were obligated to provide an opinion, $t(586) = -3.88$, $p < .001$. However, when participants were led to believe that their thoughts would be evaluated by a knowledgeable audience, an even stronger relationship was found, such that even more bullshitting behavior was reported when they were obligated to provide an opinion, $t(586) = -10.17$, $p < .001$. No other two-way and three-way interactions emerged as statistically significant from the analysis.

2.3.2. Proportion of bullshitting

The total number of thoughts clearly varied among the participants. One way of observing bullshitting behavior is to examine the proportion of the thought-listings characterized by bullshit. Thus, a Proportion of Bullshitting score was calculated by dividing the Total Bullshitting score by the product of the number of thoughts listed and 10.

The Proportion of Bullshitting data were subjected to a 2 (Participant Knowledge: unknowledgeable vs. knowledgeable) \times 2 (Obligation to Provide Opinion: no vs. yes) \times 2 (Audience Knowledge:

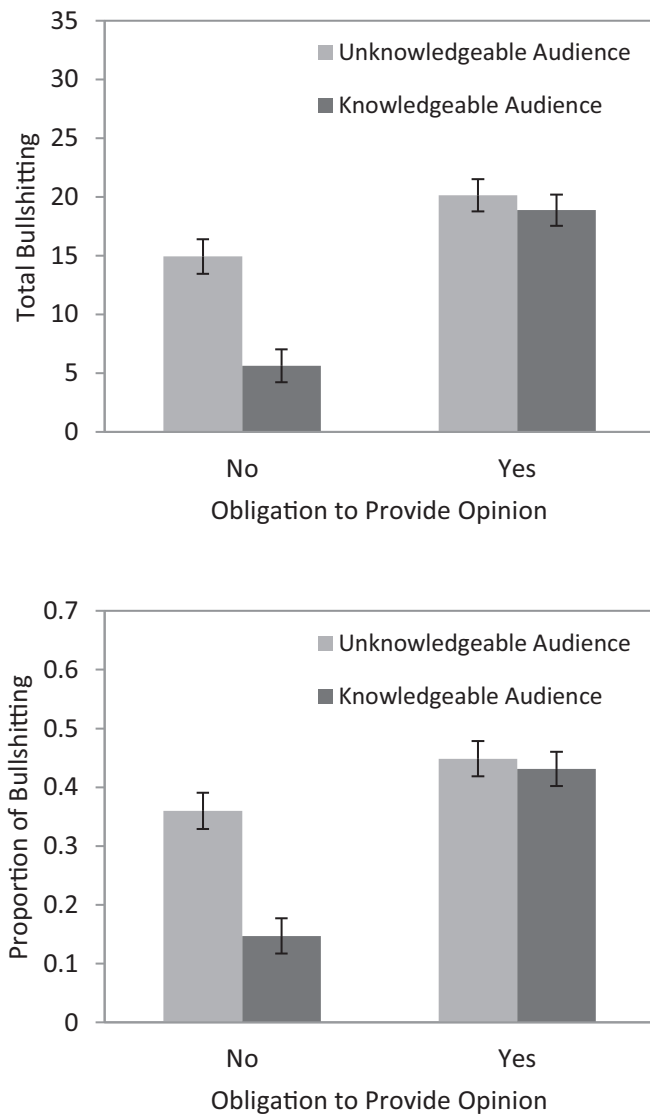


Fig. 1. Total bullshitting and proportion of bullshitting means by audience knowledge and obligation to provide opinion (Experiment 1).

unknowledgeable vs. knowledgeable) ANOVA test. The analysis yielded one marginally significant and two statistically significant main effects. First, a marginally significant main of Participant Knowledge emerged, $F(1, 586) = 2.66, p = .103$. Similar to the Total Bullshitting data, the Proportion of Bullshitting was marginally greater when participants were unknowledgeable ($M = 0.36, SD = 0.30$) than when they were knowledgeable ($M = 0.33, SD = 0.24$). Once again, consistent with the obligation to provide an opinion hypothesis, a significant main effect of Obligation to Provide Opinion emerged from the data, $F(1, 586) = 90.31, p < .001, \eta^2 = 0.13$. As expected, Proportion of Bullshitting was significantly greater when participants were obligated to provide an opinion ($M = 0.44, SD = 0.23$) than when they were not ($M = 0.24, SD = 0.27$). Finally, consistent with the ease of passing bullshit hypothesis, a significant main effect of Audience Knowledge emerged from the data, $F(1, 586) = 34.87, p < .001, \eta^2 = 0.06$. As expected, Proportion of Bullshitting was significantly greater when participants were led to believe their thoughts would be evaluated by unknowledgeable coders ($M = 0.41, SD = 0.28$) than when they were led to believe their thoughts would be evaluated by knowledgeable coders ($M = 0.29, SD = 0.25$). Thus, when it was reasonable to expect passing bullshit to be relatively easy, a greater proportion of thoughts reported were comprised of bullshit than when it was expected to be

relatively difficult.

However, the significant main effects were qualified by an Obligation to Provide Opinion \times Audience Knowledge interaction, $F(1, 586) = 5.55, p = .019, \eta^2 = 0.01$ (see bottom panel of Fig. 1). Pairwise analysis showed that when participants were not obligated to provide an opinion, a significantly greater proportion of bullshitting was observed when they were led to believe that their thoughts would be evaluated by an unknowledgeable audience, $t(586) = 7.42, p < .001$. However, no such difference was observed when participants were obligated to provide an opinion, $t(586) = 0.62, p = .530$. From another angle, when participants were led to believe that their thoughts would be evaluated by an unknowledgeable audience, a significantly greater proportion of bullshitting was observed when they were obligated to provide an opinion, $t(586) = -3.10, p = .002$. However, when participants were led to believe that their thoughts would be evaluated by a knowledgeable audience, an even stronger relationship was found, such that an even greater proportion of bullshitting was observed when they were obligated to provide an opinion, $t(586) = -10.24, p < .001$. No other two-way and three-way interactions emerged as statistically significant from the analysis.

2.4. Discussion

Consistent with Frankfurt's (1986) assertions, the results of Experiment 1 support both the obligation to provide an opinion hypothesis and the ease of passing bullshit hypothesis. It is important to note that Frankfurt treated his more clearly stated obligation to provide an opinion hypothesis and his implied ease of passing bullshit hypothesis independently. It is clear from the data that either making salient the obligations to provide and opinion or creating conditions under which people will expect bullshit to be easy to pass is enough to reduce bullshitting behavior.

However, the data also appear to suggest that the obligation to provide an opinion and ease of passing bullshit can combine in important ways to affect the production of bullshit. In fact, considerations of the relative ease of passing bullshit that may factor into one's overall propensity to engage in bullshitting appears to be most relevant when people do not feel obligated to provide an opinion. In such cases, people appear willing to engage in bullshitting only when they expect to get away with it, as would be the case when communicating with another individual who possesses little to no knowledge about the topic of discussion. Furthermore, consistent with earlier demonstrations that suggest people with topic specific knowledge tend to provide more evidence over that of explanation (i.e., less bullshit; Brem & Rips, 2000), the data here suggest that knowledge attenuates bullshitting. On the other hand, the data do not suggest that knowledge affects bullshitting beyond the interactive effect of the obligation to provide an opinion and the ease of passing bullshit. That is, both knowledgeable and unknowledgeable people appear to be likely to engage in bullshitting behavior when they are obligated to provide an opinion (regardless of the relative ease of passing bullshit) and when they are not obligated to provide an opinion but happen to find themselves in a position in which they can easily get away with bullshitting. Importantly, when people do not estimate getting away with bullshit to be easy, they appear to be willing to bullshit only when they feel obligated to provide an opinion. As such, relative to the ease of passing bullshit, the obligation to provide an opinion appears to have a more potent influence on bullshitting behavior.

3. Experiment 2

3.1. Accountability and bullshitting

Thus far, experimental data suggest that direct variations in the social expectations to have an opinion, concern for evidence, and relative familiarity of the topic affect bullshitting behavior. Each of these

manipulations appears to directly alter (as in the case of audience knowledge) or indirectly alter the conditions of social accountability relevant to bullshitting.

Accountability refers to the implicit or explicit expectation that one may be required to justify his/her beliefs, feelings, and actions to others (Scott & Lyman, 1968; Semin & Manstead, 1983; Tetlock, 1992). Traditional manipulations of accountability typically involve four components, including 1) the mere presence of another (i.e., the expectation that another person will observe his or her performance); 2) identifiability (i.e., the expectation that what one does or says will be linked to them personally); 3) evaluation (i.e., the expectation that one's performance will be assessed by another person); and 4) reason-giving (i.e., the expectation that one must provide reasons for what they say or do; Lerner & Tetlock, 1999). Furthermore, when people experience a subjective sense of accountability, failing to provide a satisfactory justification for their positions or actions will result in socially negative consequences (e.g., scornful looks, ostracism); conversely, providing acceptable justifications for one's positions or actions is usually followed by relatively positive outcomes (Stenning, 1995).

What effect does a direct manipulation of social accountability have on bullshitting? Operating under the assumption that bullshitting behavior is not an exercise in socially accountable behavior, clear predictions about the effect of accountability on bullshitting can be made from the ease of passing bullshit hypothesis. Specifically, relative to an unaccountable context, an accountable context should attenuate bullshitting behavior. Tetlock, Skitka, and Boettger (1989) showed that when people anticipate explaining and justifying their opinions to an audience (i.e., another alleged study participant), and they do not know the views of the audience to whom they feel accountable, they tend to think in more complex ways (Tetlock et al., 1989). Thinking in more complex ways should signal an interest in evidenced-based reasoning, and thus, bullshitting should be relatively attenuated under such conditions.

However, Tetlock's (1992) analysis suggests that accountability is certainly not a panacea for bullshitting. In fact, an important aspect of one's subjective sense of accountability is the audience's position relative to one's own attitude. Given that bullshitting may potentially serve multiple communicative functions, including interpersonal connectivity and expressions of identity, people may feel free to bullshit with those they anticipate to possess like-minded positions. Furthermore, discussing one's opinion with like-minded individuals should be a bullshit-tolerant context as similarly-biased discussants would be expected to agree with one's statements and be relatively less concerned with the quality of evidence concerning such ideas (Lord, Ross, & Lepper, 1979). The opposite is expected in situations whereby people anticipate explaining and justifying their opinions to an unlike-minded audience; that is, bullshitting should be ultimately attenuated when expecting to discuss one's views with unlike minded individuals precisely because unlike-minded individuals would be less likely to find bullshit acceptable or reasonable. Anticipation of engaging in a discussion with unlike-minded individuals may also be experienced as a forewarning of a persuasive attack and would thereby prompt the generation of relatively strong arguments as a defense (McGuire, 1964).

In Experiment 2, participants were exposed to a traditional manipulation of social accountability modified from the procedures employed by Tetlock et al. (1989). Specifically, participants were first asked to report their attitudes on three separate social issues and then randomly assigned to one of four accountability conditions. Participants in three of the accountability conditions were led to believe that they would be expected to participate in a communication phase of the study whereby they would be asked to explain and justify their opinions to a Sociology Professor, whereas participants in a control condition were not exposed to any of the contextual features of accountability. The former participants were given either no information about the attitudes of their alleged discussant partner, or informed that their alleged discussant partner had similar or dissimilar attitudes regarding the

same three social issues measured earlier. All participants were then asked to list their thoughts regarding each of the three issues.

Consistent with the ease of passing bullshit hypothesis, bullshitting was expected to be relatively augmented under the no accountability and the accountability with like-minded discussant conditions, but relatively attenuated under the accountability with discussant attitude unknown and the accountability with unlike-minded discussant conditions. An additional indicator of bullshitting behavior should be the degree to which participants believe they have generated strong/weak arguments in favor of their positions. To the extent that people are self-aware of their own bullshit, where bullshitting is relatively attenuated one is expected to judge his/her corresponding arguments to be relatively strong, but where bullshitting is relatively augmented one is expected to judge his/her corresponding arguments to be relatively weak.

3.2. Method

3.2.1. Participants and design

An a priori power analysis using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) revealed a required sample size of $N = 180$ ($n = 45$ per condition) to detect a medium-sized effect ($f = 0.25$) in a one-way ANOVA test with a moderate power of $1 - \beta = 0.80$. Correspondingly, a sample of 234 college undergraduates, enrolled in an introductory psychology course, were recruited to participate in exchange for partial course credit. A single-factor design was employed, whereby participants were randomly assigned to one of four Accountability conditions (no accountability, accountability with discussant attitude unknown, accountability with like-minded discussant, accountability with unlike-minded discussant). The dependent variables included Total Bullshitting and Self-Perceived Argument Quality.

3.2.2. Materials and procedure

All experimental materials were presented through a self-administered computer questionnaire using MediaLab v2012 Research Software (Jarvis, 2012); participants advanced by clicking appropriate response keys.

3.2.2.1. Attitude. First, participants' attitudes toward three attitude objects (i.e., affirmative action quotas, a nuclear weapons freeze, capital punishment) were assessed, each with six semantic differential items using a 6-point response scale with the following anchor labels: negative-positive, bad-good, unfavorable-favorable, harmful-beneficial, foolish-wise, and against-in favor. Internal consistency for the affirmative action quotas, a nuclear weapons freeze, and capital punishment items were very strong (Cronbach's alphas 0.96, 0.97, and 0.97 respectively). Responses were averaged to form an index of attitudes toward the three attitude objects such that higher Attitude scores indicated greater attitude favorability toward the objects.

3.2.2.2. Thought-listing task and accountability manipulation. Following the measurement of attitudes, participants were asked to complete a thought-listing task. The thought-listing task was coupled with instructions, modified from methods employed by Tetlock et al. (1989), to manipulate accountability.

Participants were asked to write down their thoughts for each of the three attitude objects they were asked about earlier, providing up to five thoughts. They were instructed to write only one thought per screen frame. If participants ran out of thoughts, they were instructed to type "N/A" for any remaining thought-listing screen frames.

Participants assigned to the *no accountability* condition were asked to simply respond to the thought-listing screen frames with complete candor and honesty. Participants assigned to the three *accountability* conditions were asked to complete the same thought-listing task. However, these participants were also informed of an alleged communication phase of the study whereby they would be asked to explain and

justify their opinions to a “Sociology Professor (an expert on the history of the social issues we have chosen to study)”. Participants were also led to believe that the discussion would be audiotaped to “facilitate analysis of the communication process”.

Furthermore, participants assigned to the *accountability with discussant attitude unknown* condition were not informed of the attitudinal positions of their alleged discussant partner. For the two conditions whereby the alleged discussant's attitude was revealed before the alleged discussion, participant averages for the three attitude objects were computed to determine the subsequent display of the alleged discussant's attitudes. Participant attitudes were scored by the software. Participants assigned to the *accountability with like-minded discussant* condition were provided with a description of an alleged discussant partner with similar attitudes. Specifically, when these participants reported an average greater than 3.00 (equal to or less than 3.00) for an attitude object, they were subsequently informed that they reported a relatively positive (negative) attitude and the display of their discussant's attitude for that same object was also described as being relatively positive (negative). Finally, participants assigned to the *accountability with unlike-minded discussant* condition were provided with a description of an alleged discussant partner with dissimilar attitudes. Specifically, when these participants reported an average greater than 3.00 (equal to or less than 3.00) for an attitude object, they were subsequently informed that they reported a relatively positive (negative) attitude and the display of their discussant's attitude for that same object was described as being relatively negative (positive).

3.2.2.3. Thought-rating task. Self-perceived bullshitting was measured using the same method as that of Experiment 1. Each thought listed earlier in the thought-listing task was displayed one at a time. Participants were asked to consider each thought, and responded to the following question “When you wrote the thought (displayed below) with regard to (attitude object), to what degree would you say you were truly concerned with genuine evidence and/or established knowledge?” using an eleven-point scale with *not at all* (0) to *entirely* (10) as the anchor labels.

3.2.2.4. Total bullshitting. Total bullshitting was calculated using the same method as that employed in Experiment 1.

3.2.2.5. Self-perceived argument quality. Finally, participants were asked to consider their thoughts listed for each of the three attitude objects and to respond to three items measuring their Self-Perceived Argument Quality using nine-point response scales: “Given what you wrote about Capital Punishment, how well do you feel that you have argued in favor of your opinion?” with *not at all well* (1) and *extremely well* (9) as the anchor labels; “Given what you wrote about Capital Punishment, how confident do you feel about your performance in arguing on behalf of your opinion?” with *not at all confident* (1) and *extremely confident* (9) as the anchor labels; and “Given what you wrote about Capital Punishment, how much do you agree with the following statement? I did a good job of arguing for my opinion.” with *strongly disagree* (1) and *strongly agree* (9) as the anchor labels. All nine responses were highly consistent (Cronbach's alpha = 0.90), and thus, the items were averaged for each participant. Participants were then thanked for their time and debriefed.

3.3. Results

3.3.1. Total bullshitting

The Total Bullshitting data ($M = 34.93$, $SD = 23.76$) were subjected to a one-way ANOVA with Accountability condition (no accountability, accountability with discussant attitude unknown, accountability with like-minded discussant, accountability with unlike-minded discussant) as the independent variable. Consistent with the ease of passing bullshit hypothesis, the analysis revealed a statistically significant effect of

Accountability, $F(3, 230) = 6.48$, $p < .001$, $\eta^2 = 0.08$ (see Fig. 2). As expected, participants assigned to the no accountability condition showed evidence of significantly greater bullshitting behavior than participants assigned to both the accountability with discussant attitude unknown, $t(230) = 2.41$, $p = .017$, and the accountability with unlike-minded discussant, $t(230) = 3.83$, $p < .001$. Also consistent with expectations, participants assigned to the accountability with like-minded discussant condition showed significantly greater bullshitting behavior than participants assigned to both the accountability with discussant attitude unknown, $t(230) = 2.05$, $p = .042$, and the accountability with unlike-minded discussant, $t(230) = 3.48$, $p < .001$. However, bullshitting did not differ between the no accountability and the accountability with like-minded discussant conditions, $t(230) = 0.39$, $p = .700$, nor did it differ between the accountability with discussant attitude unknown and the accountability with unlike-minded discussant conditions, $t(230) = 1.45$, $p = .149$.

3.3.2. Self-perceived argument quality

The Self-Perceived Argument Quality data ($M = 5.51$, $SD = 1.41$) were subjected to the same one-way ANOVA. Interestingly, the analysis failed to reveal a statistically significant effect of Accountability, $F(3, 230) = 0.91$, $p = .430$. That is, the perceived strength of arguments generated was unassociated with the Accountability condition by which participants were assigned (see Fig. 2). The absence of an Accountability effect appears to be due to the smaller than expected variation found in the Self-Perceived Argument Quality. On average, participants appeared to perceive relatively strong argument generation; the sample mean was significantly greater than the midpoint (5.00), $t(233) = 5.55$, $p < .001$. However, consistent with expectations, self-perceived strength of the arguments was significantly correlated with the degree to which participants reported bullshitting, $r(232) = -0.47$, $p < .001$, such that relatively high Self-Perceived Argument Quality was associated with the relatively low levels of Total Bullshitting.

3.4. Discussion

The results of Experiment 2 support the ease of passing bullshit hypothesis. That is, people appear to be especially likely to bullshit when it may be perceived as acceptable

or relatively easy to pass – when they are not held accountable or when they expect to justify their positions with like-minded individuals. When receiving a social pass for bullshitting is not expected to be easy – when people are held accountable or when they expect to justify their positions to people who disagree with their attitudes – people appear to refrain from bullshitting.

The experimental data suggest that accountability can affect the severity of bullshitting, but it does not appear to directly affect the perceived strength of one's arguments. In fact, the null effect of Accountability on Self-Perceived Argument Quality suggests that participants may have been unaware of the influence of bullshitting on the generation of argument strength. On the other hand, the correlation found between Total Bullshitting and Self-Perceived Argument Quality suggests that accountability may indirectly effect the perceived strength of one's arguments through the degree by which one engages in bullshitting. Thus, although the variation in Self-Perceived Argument Quality found between Accountability conditions did not correspond with the Total Bullshitting found in those conditions, the variation in Self-Perceived Argument Quality found within the Accountability conditions clearly corresponded (inversely) with Total Bullshitting.

4. General discussion

The concept of bullshitting first arose through an analytical philosopher's critique of a common form of communication (Frankfurt, 1986). Although it has received attention in philosophy (Cohen, 2002; Hardcastle & Reisch, 2006; Law, 2011; Penny, 2005), or used as an

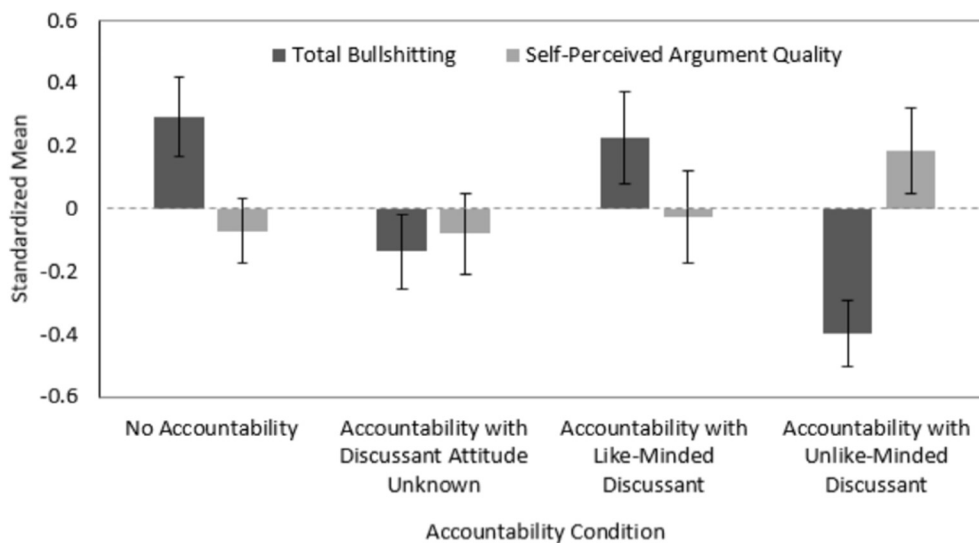


Fig. 2. Total bullshitting and self-perceived argument quality standardized means by accountability condition (Experiment 2).

explanation for varying organizational behavior (Allen et al., 2012; Morgan, 2010; Spicer, 2013), it has virtually escaped empirical examination. Understanding bullshitting is not simply an attempt to understand the conditions under which bullshitting is most prevalent, but is also an attempt to understand the psychological processes that both enable people to communicate with little to no concern at all for evidence as well as the processes that explain why people accept so much bullshit without questioning its validity.

The experimental studies reported here provide a great deal of information relevant to the social psychology of bullshitting. The current research examined the extent to which bullshitting is connected to various antecedents, and thereby provides data about the social conditions under which self-perceived bullshitting is likely to occur. Specifically, familiarity with the topic under discussion, social expectations to have an opinion, audience topic knowledge, and accountability conditions affect the degree to which self-perceived bullshitting is likely to occur. On its own, anything that an audience may do to enhance the social expectation that one should have or provide an opinion appears to increase the likelihood of the audience receiving bullshit. In fact, the findings of Experiment 1 suggest that people bullshit more when the social expectations to have an opinion are high. Such findings are not surprising when accepting Frankfurt's (1986) assumption that by default, people feel obligated to have an opinion about everything. In addition to social cues that suggest one ought to have an opinion, Experiment 1 and Experiment 2 both suggest that the relative ease with which bullshit might be acceptable to the audience also appears to augment bullshitting behavior; that is, people appear to bullshit freely when they expect to get away with it. Interestingly, however, bullshitting behavior appears to be most significantly reduced when these two factors converge (i.e., when people do not feel obligated to provide an opinion and receiving social tolerance for bullshit is not expected to be easy).

It is important to note that the terms “bullshit” and “bullshitting” were not employed in either of the experiments. Not only do laypeople have widely varying beliefs about what constitutes bullshit, it seems unlikely that people are generally ready to admit to bullshitting. In fact, examination of the bullshit averages in each experiment was somewhat mild relative to the greatest possible point on the scale. Thus, people may generally underestimate the degree to which they engage in bullshitting, even when it is described as “communicating without regard for evidence”. Also, people can sometimes be unaware of their interest or concern for evidence. For instance, people often believe they are speaking biblically when they tout “Spare the rod, spoil the child.” or “This, too, shall pass.” However, close examination reveals that such

proverbial statements are not biblical. Yet, people are unlikely to recognize their mistake on their own, and in such cases they are unlikely to report that they have little to no interest or concern for systemic biblical evidence. Although self-reported concern for evidence is not a perfect measure of bullshitting behavior, the findings reported here suggest that the measure is sensitive enough to detect meaningful differences between theoretically derived conditions.

4.1. Limitations

Two limitations to the research conclusions deserve consideration. The first limitation involves the possibility that perceptions of bullshitting behavior may depend on whether the perceiver is an active participant in the interaction (as is the case in many instances of bullshit exposure) or merely a passive observer. Presumably due to the additional cognitive demands placed on active participants (Jones & Nisbett, 1971; Patterson, 1995; Patterson & Stockbridge, 1998), active participants and mere observers often differ in their evaluations of social interactions (Street, 1985; Street, Mulac, & Wiemann, 1988) and the social targets themselves (Monahan, 1995; Monahan & Zuckerman, 1999). Thus, what appears to be bullshitting from an observer's perspective may not be considered so by those actively engaged in the encounter. To the extent that the current studies placed participants in relatively passive positions, the generalizability of the findings to more involved discussants should be examined.

Second, the conclusions must be tempered by the fact that participants were not sampled with respect to the entire range of cognitive ability levels. Pennycook et al. (2015) demonstrated that one's receptivity to pseudo-profound bullshit is negatively associated with cognitive ability measures. Furthermore, Sá, Kelley, Ho, and Stanovich (2005) found participants with lower cognitive ability and close-minded thinking tended to use an unsophisticated form of evidence (e.g., reiteration or elaboration of the original theory). Future research would do well to examine the possibility that cognitive abilities moderate the links between bullshitting antecedents and consequences.

4.2. Future directions

Given that these are among the first studies to empirically investigate the behavior of bullshitting, there are many opportunities for future research. Four general directions are suggested. First, there is little to no empirical knowledge regarding the communicative functions, purposes, or intents of bullshitting. Not only may bullshitting be used in the context of persuasion, but bullshitting would appear to be

quite useful for enhancing social bonding, expressing opinions for which one feels obligated to have and express, entertainment, killing awkward silence, or predictions, expressions or claims for which there is no readily available evidence (e.g., “Baby, I’ll love you forever.”). A better understanding of the many reasons in which people engage in bullshitting would provide important insights into this behavior.

Second, the antecedents studied/identified here are not an exhaustive list. Future research should further examine the antecedents of bullshitting to elucidate the conditions under which people bullshit in their social interactions. In delving into this question, it will be necessary to investigate the various motives that eliminate a concern for evidence and truth. One possibility involves the difficulty to refrain from bullshitting. That is, common observation suggests that locating and supporting any and all claims with evidence or existing knowledge requires time and effort that people are not typically willing to expend.⁸ After all, people often operate as cognitive misers, relying on heuristic, unsystematic processing to conserve cognitive resources (Fiske & Taylor, 1984).

Another potential motive involves motivated reasoning (Kunda, 1990). That is, it appears that people do not always welcome, or do not want to believe, the truth (Kimbrough, 2006). They prefer to believe what they want the truth to be (Lord et al., 1979). Interestingly, Gal and Rucker (2010) demonstrated that one’s motivation to advocate for closely held beliefs often increases when those beliefs are undermined by evidence. As such, people may be unconcerned with evidence and truth if it is dissonant with what they want to believe. However, people may have many different motives for having little interest in evidence and truth. What is unclear is whether or not different motives for accepting bullshit, or advocating one’s own beliefs through bullshitting, lead to different consequences, such as one’s susceptibility to social influence or openness to alternative points of view.

Third, the effects of bullshitting and receptivity to bullshit can be far-reaching and dysfunctional. Festinger, Riecken, and Schachter’s (1956) seminal examination of religious beliefs and unfulfilled prophecies suggest that people may engage in more bullshitting and be more receptive to it when they feel relatively uncertain. Our understanding of the degree to which people may be influenced by bullshit is critical to the human condition. Future research may do well to examine bullshitting as a frame of mind and its potential connections with interest/openness to additional information, fake news reports and resistance to persuasion. That is, relative to the mindset of one interested in evidence, a bullshitting mindset should be associated with less interest in additional information regardless of his/her attitude and regardless of the position the additional information is expected to support.

Finally, thinking and communicating with a concern for truth is essential to sound judgment, reasoning and decision making. A fundamental characteristic of information, critical to sound judgment, reasoning and decision making, is that of the validity of the information (Grice, 1975). In so doing, the bullshitter violates reasonable assumptions that regulate the conduct of conversation in everyday life. According to Grice (1975), conversations progress with respect to a cooperativeness principle, which is characterized by four conversational maxims. Bullshitting (i.e., communications for which one lacks reasonable evidence) is a violation of Grice’s (1975) maxim of quality (i.e., the reasonable assumption that senders try to make contributions to conversation that are true). Thus, greater understandings of how to reduce bullshitting and its unwanted effects appear to be critical to functional, human communication.

Whether they be claims or expressions of opinions about the effects of vaccinations, the causes of success and failure, or political ideation,

⁸ This notion is consistent with what is known in the bullshit literature as the *bullshit asymmetry principle* (or Brandolini’s Law), which holds that the effort needed to identify something as bullshit, or to refute it, is greater than the effort needed to produce it (Brandolini, 2013).

doing so with little to no concern for evidence or truth is wrong. With their reliance on empirical evidence, it is estimated that social scientists are well positioned to “call bullshit” (i.e., identify it) when they see it. Preti (2006) argued that receivers of bullshit can serve as agents of bullshit reduction by asking the bullshitter if he/she really believes what they claim. That is, prompting people to reflect on the reasons for their claims may be an important first step down the road of more evidence-based communication. As Taylor (2006) argued, the bullshitter “...cannot sell what we do not buy.” (p. 50). What happens when bullshitters are called on their bullshit, requested to answer “How” questions rather than “Why” questions (see Glassner, Weinstock, & Neuman, 2005), or simply asked to explain why they think what they do? Common experience suggests that asking bullshitters to consider evidence in support of their claims can be a serious conversation killer. Doing so may stop the bullshitting, but it may not necessarily enhance evidence-based communication. Future research will do well to respond to such questions empirically and determine effective ways of enhancing the concern for evidence and truth.

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