Social perception and influence of lies vs. bullshit: a test of the insidious bullshit hypothesis

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Abstract

Although a ubiquitous social behavior, little is known about bullshitting (i.e., communicating with no regard for truth and/or evidence) and its effects on social perception and influence. Although bullshit and lies are viewed as undesirable, the distinction may have important implications for social influence. Frankfurt's (1986) *insidious bullshit hypothesis* (i.e., bullshitting is evaluated less negatively, but more insidious, than lying) is examined in light of social perception (i.e., evaluation and perceived motives; Experiment 1) and social influence (Experiment 2). Results suggest bullshitting is evaluated less negatively than lying and identifies ignorance, dishonesty, and opinion expression as mediators of a bullshit/lie-evaluation link. Furthermore, relative to lies, bullshit appears to have a more potent impact on that which is perceived to be true as well as attitudes formed for novel attitude objects.

Bullshitting involves intentionally or unintentionally, consciously or unconsciously, communicating with little to no regard or concern for truth, genuine evidence, and/or established semantic, logical, systemic, or empirical knowledge (Frankfurt, 1986; Petrocelli, 2018). As such, bullshitting is often characterized by, but not limited to, using rhetorical strategies designed to disregard truth, evidence and/or established knowledge, such as exaggerating or embellishing one's knowledge, competence, or skills in a particular area or talking about things of which one knows nothing about in order to impress, fit in with, influence, or persuade others.

Frankfurt (1986) surmised that bullshit is unavoidable whenever circumstances require one to talk about things he/she knows little to nothing about. When a person's obligations to speak about a topic are more extensive than his/her knowledge of the facts relevant to that topic, bullshit is often the result. 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). Although people appear to feel obligated to have an opinion about everything, they cannot possibly have

an informed opinion about everything, and therefore, bullshit is continually produced (Petrocelli, 2018). Given that bullshitting is almost unavoidable (Allen, Allen, & McGoun, 2012; Frankfurt, 1986; Morgan, 2010), it is surprising that little empirical knowledge about the behavior exists.

Although it appears to be an inevitable social behavior and a salient feature of our culture (Law, 2011; Penny, 2005), and bullshit can be misperceived as something profound (Pennycook, Cheyne, Barr, Koehler, & Fugelsang, 2015; Pfattheicher & Schindler, 2016; Sterling, Jost, & Pennycook, 2016), the potential utilities of bullshitting remain unexamined. A better understanding of the social perception of bullshit, and its influence on attitudes relative to lies, sheds important light on the potential antecedents and communicative functions of bullshitting behavior. The current investigation examines potential consequences of bullshitting relative to lying and the effects they have on social influence.

Bullshitting Vs. Lying

Bullshitting is distinct from lying (Frankfurt, 1986). The liar knows the truth and communicates with respect to the goal of detracting others from the facts. 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

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communicating the truth. The bullshitter doesn't care what the truth actually is, and he/she isn't even trying to know or communicate the truth. Although the bullshitter and liar both behave deceptively by misrepresenting their interest in communicating the truth, the liar *knows* the truth and the bullshitter does not.

How do people react to the bullshitter relative to the liar? How do any differences in reactions impact the influence or persuasiveness of such communications? These questions are the focus of the current research.

Central to these questions is an ironic, *insidious bullshit hypothesis*: although common experience suggests that bullshitting may be evaluated less negatively than lying, bullshit is more insidious than lies (Frankfurt, 1986). Because common experience also suggests that veridical and truthful information is valued more than that of false information, we expected to find support for the first part of Frankfurt's hypothesis—bullshitting is evaluated less negatively than lying—in Experiment 1. To further understand the links between bullshitting, lying and social evaluation, we further explored the possibility that a bullshitting/lying-evaluation link is mediated by multiple cognitive appraisals including: ignorance, deceptive intentions, dishonesty, ulterior motives, lack of concern for receivers, expression of opinion, expectations to be taken seriously, impression management, and appearance of being knowledgeable.

Bullshit may also be more insidious than lies if bullshitters are potentially more influential than liars. Persuasion research (Petrocelli, in press) has already shown that relative to evidence-based arguments, bullshit can be influential to the extent that people process persuasive messages through the peripheral route of cognitive elaboration (Petty & Cacioppo, 1984, 1986). Furthermore, when people know they've been lied to they know the information they've received is false. On the other hand, when people know they've been bullshitted, the bullshit is not necessarily false—*it could be true*. Thus, one may hold greater uncertainty in his/her attitudes when the information received and processed has been packaged in bullshit rather than truth or lies. We test these possibilities in Experiment 2.

EXPERIMENT 1: Social Perception of Lies Vs. Bullshit

Frankfurt (1986) suggested that social perceivers are less offended by the bullshiter than the liar (also see: Kimbrough, 2006; Reisch, 2006). Although common experience suggests that bullshitters often "get away" with something that liars do not, it is not entirely clear why this appears to be the case. Is bullshitting any less undesirable than lying? What factors mediate any relationship between bullshitting vs. lying and social perception?

There appear to be several possible mediators of the bullshitting/lying and social perception link. However, the existing empirical literature is mute on both the bullshitting/lying and social perception link as well as specific factors that might mediate the relationship.

Experiment 1 participants processed a scenario describing a single communicator who clearly engages in bullshitting or lying. Participants then considered potential traits and motives for the communicator (causal ascriptions/mediators). Finally, participants reported their evaluation of the social communicator. Consistent with Frankfurt's (1986) estimation, lying was hypothesized to be evaluated more negatively than bullshitting. The potential mediators of the relationship between the content (bullshitting vs. lying) and evaluation were fairly exploratory.[1]

Method

Participants and Design

A sample of 371 college undergraduates, 72.2% female (M_{age} = 18.60, SD = .78), participated in exchange for partial course credit. A single factor, between-subjects design was employed, such that participants were randomly assigned to one of two Scenario Content conditions: bullshitting vs. lying. Dependent variables included several potential casual ascriptions/mediators and Evaluation.[2]

Adequate sample size was determined based on the recommendations of statisticians (Fritz & MacKinnon, 2007). Both a- and b-paths were expected to be small to medium in size (i.e., .26). For such expectations, Fritz and MacKinnon provided an empirical estimate of 148 participants needed to reach a power of .80.

Materials and Procedure

All experimental materials were presented through a self-administered computer questionnaire using MediaLab v2016 Research Software (Jarvis, 2016); participants advanced by clicking appropriate response keys.

Scenario Content Participants were exposed to rather passive forms of bullshitting or lying. Specifically, participants were randomly assigned to review information about a social target named *Tom* [Jim] engaged in *bullshitting* [lying]. Specifically, participants read the following:

> *Tom* [Jim] states something about the advantages and disadvantages concerning daycare for pre-kindergarten children that he *does not know to be true, nor does Tom know it to be false* [knows to be false]. That is, *Tom*

doesn't care about [Jim knows fully well] the evidence regarding the advantages and disadvantages concerning daycare for pre-kindergarten children. Further, *Tom does not know or care if what he is talking about is true or false* [Jim clearly understands what he is talking about]. For whatever reason, *Tom communicated with little to no concern or regard for established knowledge or genuine evidence – Tom spoke without any regard for truth* [Jim did not to speak the truth – Jim spoke a lie].

Causal Ascriptions/Mediators After reviewing the scenario, participants were asked to respond to statements about Tom's [Jim's] behavior using a nine-point scale with *strongly disagree* (1) and *strongly agree* (9) as the anchor labels. These items included: Ignorance, Deceptive Intentions, Dishonesty, Ulterior Motives, Lack of Concern for Receivers, Expression of Opinion, Expectations to be Taken Seriously, Impression Management, and Appearance of Being Knowledgeable. For example "*Tom's* [Jim's] *behavior is an example of his ignorance.*", and "*Tom* [Jim] *was simply expressing his opinion.*"

Evaluation Finally, participants rated the bullshitter's [liar's] behavior by responding to seven semantic differential items using a nine-point response scale with anchor labels including: *negative/positive, bad/good, unfavorable/favorable, harmful/beneficial, foolish/wise, against/in favor, undesirable/desirable*; Cronbach's alpha = .94.

Results

As expected, participants assigned to review the liar scenario evaluated the social target's behavior more negatively ($M = 2.76$, $SD = 1.22$) than participants assigned to the bullshitter scenario ($M = 3.78$, $SD = 1.21$), $F(1, 369) = 65.66$, $p < .001$, $\eta^2 = .15$. Participants assigned to review the bullshitter scenario evaluated the behavior as more representative of ignorance, due less to deceptive intentions, less representative of dishonesty, due less to ulterior motives, more representative of simply expressing an opinion, a weaker expectation of being taken seriously, and more representative attempts to appear knowledgeable (see Table 1). The bullshitter and liar did not differ with respect to their lack of concern for the listeners (receivers), nor did they differ in their judgments of the degree to which the communicators attempted to maintain a positive impression.

To explore the possibility that specific causal ascriptions mediate the link between bullshitting/lying and social perception, a bootstrap procedure to construct bias-corrected confidence intervals based on 5000 random samples with replacement from the full sample was employed (see Preacher & Hayes, 2004, 2008; macro by Hayes, 2013). Each of the nine

Table 1 Descriptive Statistics of Causal Ascriptions of Behavior by Scenario Content and One-Way ANOVA Results (Experiment 1)

Scenario Content

| Variable	Bullshitter[1]		Liar[2]			
	M	SD	M	SD	$F_{(1, 369)}$	p
Ignorance	6.73	1.99	3.60	2.42	184.40	<.001
Deceptive Intentions	3.81	1.87	6.78	1.74	252.12	<.001
Dishonesty	4.02	2.03	7.48	1.69	318.50	<.001
Ulterior Motives	3.88	1.93	6.55	1.82	188.40	<.001
Lack of Concern for R.	6.11	2.04	6.01	2.11	.23	.636
Expressing Opinion	6.09	2.13	3.36	1.91	169.86	<.001
Expected to be Taken S.	5.67	1.99	6.21	1.98	6.70	.010
Impression Management	5.32	1.81	5.21	1.95	.36	.548
Appear Knowledgeable	6.41	2.01	5.50	2.26	16.86	<.001

Note. [1] $n = 185$. [2] $n = 186$. R = Receivers. S = Seriously

causal ascriptions was entered simultaneously as a potential mediator (PROCESS model 4; see Fig. 1). The size of the total indirect effect was .56 ($SE = .17$), 95% CI [.22, .91], indicating a statistically significant indirect path. The analysis also revealed only three statistically significant indirect paths. First, the size of the indirect effect of Content Scenario on Evaluation, through Ignorance, was −.31 ($SE = .08$), 95% CI [−.48, −.15]; the path from Ignorance to Evaluation was also significant, $\beta = −.20$, $t(360) = −4.11$, $p < .001$. Likewise, the size of the indirect effect of Content Scenario on Evaluation, through Dishonesty, was .38 ($SE = .13$), 95% CI [.14, .66]; the path from Dishonesty to Evaluation was also significant, $\beta = −.21$, $t(360) = −3.38$, $p = .001$. Finally, the size of the indirect effect of Content Scenario on Evaluation, through Expressing Opinion, was .42 ($SE = .08$), 95% CI [.27, .59]; the path from Expressing Opinion to Evaluation was also significant, $\beta = .29$, $t(360) = 5.81$, $p < .001$. The otherwise highly significant direct effect test of Content Scenario on Evaluation, $\beta = .39$, $t(369) = 8.10$, $p < .001$, was significantly reduced when the mediators were included in the model, $\beta = .18$, $t(360) = 2.71$, $p = .007$. All other indirect effect tests did not indicate significant mediation.

Discussion

The results of the Experiment 1 clearly support the hypothesis that social perception of bullshitting is less negative relative to that of lying. The results also strongly suggest that this difference is largely due to three separate perspectives that people appear to have for the bullshitter that they don't associate as strongly with the liar; bullshitting is perceived less negatively than lying because people assume that the bullshitter is simply

Fig. 1 Results of mediation analysis (Experiment 1). *Note.* Coefficients displayed in the figure are standardized beta coefficients. Liar coded 0, Bullshitter coded 1. R = Receivers. S = Seriously. *p < .05. **p < .001
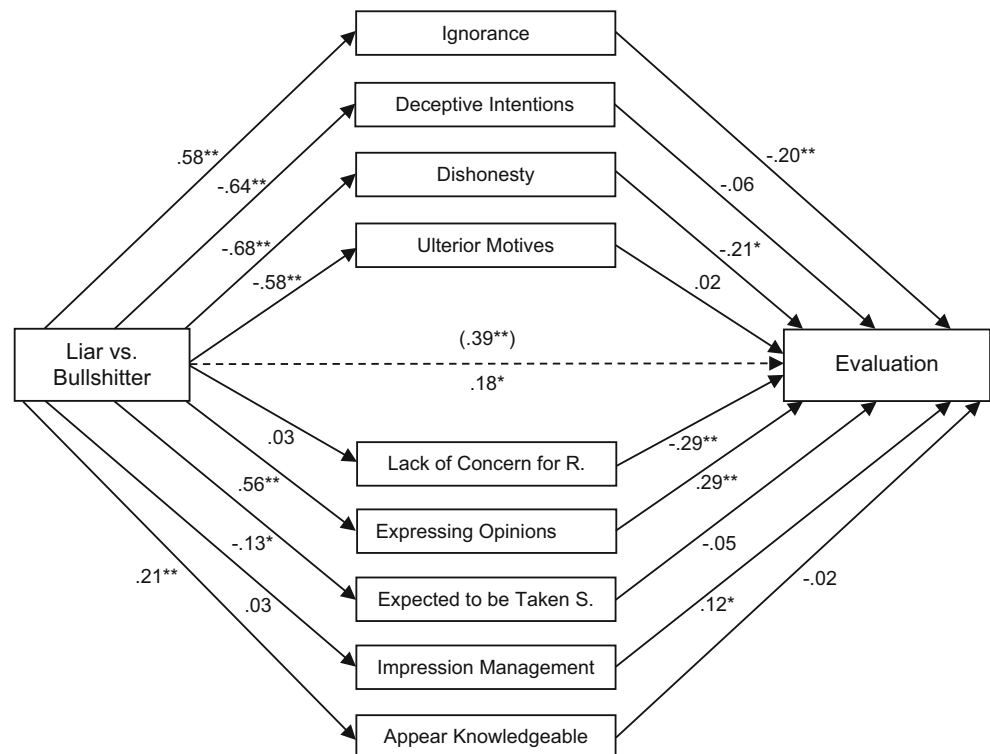
representing his/her ignorance, relatively less dishonest than the liar, and more likely to be expressing an opinion.

Interestingly, these results appear to be in line with philosophical speculations about the bullshitter's intentions and frame of mind. As Frankfurt (1986) surmised, bullshitting permits one to "…try out various thoughts and attitudes in order to see how it feels to hear themselves saying such things and in order to discover how others respond, without it being assumed that they are committed to what they say." (p. 91). Even when it is clear that one is expressing his/her opinion via bullshit, people do not appear to hold the bullshitter to the same standard as the liar (see: Reisch, 2006).

EXPERIMENT 2: Social Influence of Bullshitting Vs. Lying

Differing social standards for bullshitting and lying should also be relevant to social influence. We propose a *dismissal readiness hypothesis* in anticipation of differing effects that bullshitting and lying may have on social influence. Indeed, there are reasons to believe that people have a tendency to more readily dismiss information provided by liar than bullshitters; thereby making bullshit a more assimilative influence than that of lies. Any information that is categorized as a lie is known to be false, whereas bullshit *may be* true. It is with such a difference in the certainty of truth that people should be more likely to reject information from the liar more readily than the bullshitter.

When we discover that someone has lied to us, we know immediately, and with certainty, that the information we received is false. On the other hand, when we discover that someone has bullshitted us, not only may we not know for certain the truth of the information, we may not be certain about its nature for some time. Thus, feedback in the form of discovered lies provides greater clarity about the truth than does discovering bullshit. Furthermore, feedback regarding one's false beliefs must be immediate and clear in order for corrective efforts to succeed (see: Castelli & Ghetti, 2014; Fazio & Marsh, 2010). The diagnosticity of the truth that comes with discovering lies provides greater certainty of the truth than that provided by ambiguously true/correct or false/incorrect bullshit. Thus, *bullshit* [lies] would be expected to have a more *assimilative* [contrastive] influence relative to *lies* [bullshit].

In addition to examining the effects on bullshitting and lying on what people believe to be true, we make an important distinction between two types of bullshit. Senseless *pseudo-profound bullshit*, such as intentionally ambiguous corporate/business speak (e.g., "Our collective mission is to functionalize customer-driven enterprise solutions for leveraging underutilized portfolio transparencies and the bandwidth of our benchmark phlogistic sales."; Beckwith, 2006; Christensen, Kärreman, & Rasche, 2019; Duncan, 2016; Fugere, Hardaway, & Warshawsky, 2005; Law, 2008; McCarthy, Hannah, Pitt, & McCarthy, 2020; Spicer, 2013) or alternative medicine-quackery that embellishes senseless statements with fanciful language to make them sound

profound, such as "Hidden meaning transforms unparalleled abstract beauty." (Pennycook et al., 20152015).

The more sophisticated and more commonly encountered *common bullshit* contains meaning and prescriptive implications, incorporates numbers and figures, and is usually designed to inform, influence, persuade, or to convince people one knows what they are talking about when they really do not. Common bullshit may be inaccurate, incorrect, or false, as in "Consumers should be aware of plastic rice from China that is difficult to discern from real rice as up to 15% of rice from China contains plastic." We explored the impact of liars and bullshitters on receptivity and sensitivity to both pseudo-profound bullshit and common bullshit in Experiment 2.

Prior research conducted by Petrocelli (in press) compared the persuasive impact of bullshit- vs. evidence-based frames of both strong and weak arguments on attitudes. Under conditions of peripheral route processing, bullshit-frames of strong and weak arguments were equally influential and statistically equivalent to weak arguments embedded within evidence-based frames. If under certain conditions bullshit is as influential as evidence-based frames of the same arguments, it is reasonable to expect bullshit to be more influential than that of lies. If it can be demonstrated that bullshit leads to greater receptivity to false information than lies, as well as more influential to attitudes, it would further support the insidious bullshit hypothesis.

Method

Participants and Design

A sample of 194 college undergraduates, 54.6% female (M_{age} = 18.80, SD = .74), were recruited to participate in exchange for partial course credit. Sample size was determined based on the recommendations of statisticians (Lakens & Evers, 2014; 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. A single factor, between-subjects design was employed, such that participants were randomly assigned to one of two Author's Deceptive Background conditions: liar vs. bullshitter.

Materials and Procedure

All experimental materials were presented through a self-administered computer questionnaire similar to Experiment 1. The study was introduced as one dealing with the perceptions of various statements. Thus, similar to Experiment 1, participants were exposed to rather passive forms of bullshitting or lying.

Author's Deceptive Background Participants were informed that in a previous stage of the study, other participants had been recruited as authors instructed to compile a list of several statements on the basis of their own knowledge. Participants were then randomly assigned to receive one of two pieces of information about the authors. Participants assigned to the *bullshitter* [liar] condition read that the *bullshitter* [liar] was specifically recruited as an author because he/she was rated by people who know him/her as an incredible *babbler/flim-flamer* [liar]. They were also reminded that a *babbler/flim-flamer* [liar] is someone who often makes statements *without any real concern for facts, truth, genuine evidence, or existing knowledge, and thereby does not know it to be true/correct or false/incorrect* [that are not true].

Just prior to each assessment set, participants were reminded of their assigned author's communicative background. For example, prior to beginning the Common Bullshit Receptivity and Sensitivity Scale, participants read: "Remember, the author of the statements you are about to review were authored by someone who was rated by people who know him/her as an incredible *liar* [babbler/flim-flamer]."

Dependent Variables

Pseudo-Profound Bullshit Receptivity and Sensitivity Participants were randomly presented with 20 quotations, allegedly authored by the liar or bullshitter, curated by Pennycook et al. (2015). Included are 10 seemingly profound but senseless quotations; e.g., "Consciousness is the growth of coherence, and of us.") and 10 prototypically profound quotations (e.g., "A river cuts through a rock, not because of its power but its persistence."). Participants were instructed to read each statement, take a moment to think about what it might mean, and then rate its profundity using a 5-point scale with *not at all profound* (1) and *very profound* (9) as the anchor labels.

Pseudo-Profound Bullshit Receptivity is calculated as the mean of the senseless quotations. Pseudo-Profound Bullshit Sensitivity is calculated by taking the difference of the mean of the prototypically profound quotations and the mean of the senseless quotations, such that greater scores represent greater bullshit detection (Pennycook et al., 2015). Cronbach's α for the senseless quotations and prototypically profound quotations were .75 and .87 respectively.

Common Bullshit Receptivity and Sensitivity Participants were then randomly presented with 44 statements allegedly authored by the liar or bullshitter. Statements were constructed by a combination of sources found to be reliable measures of credulity (see: Fessler, Pisor, & Holbrook, 2017) and feasible, but questionable and verifiable, claims (https://www.snopes.com/; Publications International Ltd., 2012). Half of the

claims are true (e.g., "Australian toilet basins are designed to flush counterclockwise.") and half are false (e.g., "Bay leaves contain a compound that decreases anxiety by 25% when burned."). In order to make bullshit detection possible, items were constructed using cues to bullshit in the form of numbers and/or figures so as to make the true items somewhat more feasible and the false items somewhat less feasible. Participants rated how confident they were that each statement is true or false using a 7-point scale with *I'm absolutely certain this statement is false* (1) and *I'm absolutely certain this statement is true* (7) as the anchor labels.

Common Bullshit Receptivity and Bullshit Sensitivity scores were calculated in the same was as that of Pennycook et al.'s (2015) measures of pseudo-profound bullshit detection. Cronbach's α for the true and false statements were .73 and .72 respectively.

Truth Sensitivity Next, participants were randomly presented with claims allegedly authored by the liar or bullshitter. We selected 40 claims from Nelson and Narens's (1980) general knowledge norms—half of which were correct/true (e.g., "Hemmingway is the last name of the author who wrote *The Old Man and the Sea*.") and half of which were incorrect/false (e.g., "The U.S. Naval Academy is located in Norfolk.") and are generally regarded as unknown (average correct recall is 28% and 27% of norming participants, respectively; Tauber, Dunlosky, Rawson, Rhodes, & Sitzman, 2013). Participants rated how true they found each statement on a 6-point scale using *definitely false* (1) and *definitely true* (6) as the anchor labels.

Similar to the bullshit sensitivity measures, Sensitivity to Truth score was calculated by taking the difference of the mean of the true claims and the mean of the false claims, such that greater scores represent greater truth detection. Cronbach's α for the true and false statements were .75 and .73 respectively.

Attitudinal Influence Finally, participants reported their Attitude for each of four novel attitude objects allegedly endorsed by the liar or bullshitter ("The Cadillac Flame is a fantastic car." "Fitour Cava is a brilliant wine." "Changeling of Gold is a wonderful book to read." "Little Joe is the best race horse in the sport today.") and four attitude objects not endorsed by the liar or bullshitter ("The Aston Martin DB5 is a dismal car." "Ciognon Frizzante is a miserable wine." "Hunters of Glory is a boring book to read." "Jigsaw is the slowest and worst race horse in the sport today."). All attitude objects were presented randomly and measured by responses to three nine-point semantic differentials with *positive-negative*, *good-bad*, and *desirable-undesirable* as the anchor labels. Cronbach's α ranged from .84 to .93 for the endorsed attitude objects and from .79 to .95 for the attitude objects not endorsed.

Results

A multivariate analysis of variance test was first computed including all dependent variables and with Author's Deceptive Background as the independent variable. This analysis was statistically significant, Wilks' λ = .937, $F(7, 186)$ = 2.38, p = .023, $\eta^2_{partial}$ = .082. Follow-up one-way analysis of variance tests were computed. As is evident from Table 2, participants exposed to claims made by the bullshitter were significantly more receptive to Common Bullshit than their counterparts exposed to claims made by the liar. Likewise, participants exposed to claims made by the bullshitter were significantly less sensitive to Common Bullshit than their counterparts exposed to claims made by the liar. Such findings were not true for Pseudo-Profound Bullshit Receptivity and Sensitivity, nor for Sensitivity to Truth, as no differences were found for these variables.

Attitudes were also significantly influenced. Participants exposed to both positive and negative attitude relevant statements made by the bullshitter reported significantly more positive and negative attitudes, respectively, than did their counterparts exposed to both positive and negative attitude relevant statements made by the liar.

Discussion

Consistent with the dismissal readiness hypothesis, the data suggest that bullshit and attitudinally relevant information has a more potent effect on the claims that people believe to be true and their own attitudes when the information is derived from bullshitters than liars. Thus, attitudes formed from bullshit exposure, as opposed to rejected lies, appear to leave social perceivers more vulnerable to influence from bullshit.

We suspect that the face validity of the Pseudo-Profound Bullshit Receptivity and Sensitivity Scale of Pennycook et al. (2015) is enhanced once people become privy to the fact that the content is derived from a perpetual liar or bullshitter. Furthermore, our Truth Sensitivity measure may have proven too difficult given that on average less than 30% of people can recall the correct answers to our items. Our data suggest that the bullshitter may not have the same type of influential power over that of the liar when it comes to pseudo-profound styles of bullshit or information within domains that people generally have relatively little knowledge—although this is only a preliminary conclusion.

In any case, people do not appear to completely ignore the fact that the information was based on bullshit or lies because this categorization does appear to impact how people form attitudes on the basis of that information.

Table 2 Descriptive Statistics of Author's Deceptive Background and One-Way ANOVA Results (Experiment 2)

	Author's Deceptive Background						
	Liar		Bullshitter				
Variable	M	SD	M	SD	$F_{(1, 192)}$	p	$\eta^2_{partial}$
Pseudo-Profound Bullshit Recept.	2.26	.68	2.37	.78	1.02	.313	.005
Prototypically Profound	3.19	.61	3.26	.66	.70	.403	.004
Pseudo-Profound Bullshit Sens.	.92	.75	.89	.78	.07	.782	< .001
Common Bullshit Receptivity	3.43	.54	3.70	.55	11.34	.001	.056
Common Bullshit (True)	3.94	.58	3.99	.49	.51	.475	.003
Common Bullshit Sensitivity	.51	.59	.29	.52	6.89	.009	.035
Truth Sensitivity	.78	.65	.70	.59	.89	.345	.005
Positive Attitudinal Influence	5.29	1.26	5.65	1.14	4.24	.041	.022
Negative Attitudinal Influence	5.12	1.63	4.64	1.79	3.79	.053	.019

Thus, knowledge that one is likely to be bullshitted or lied to has a differential impact on perceptions of what is true as well as one's attitudes.

General Discussion

Given that bullshit may be misperceived as something profound (Pennycook et al., 2015; Pfattheicher & Schindler, 2016; Sterling et al., 2016), it is important to understand the conditions under which bullshitting is most prevalent (Petrocelli, 2018) as well as the potential consequences and utilities of bullshit. Through advertising, politics, tabloids, television, and social media, bullshit and lies appear to emerge from every direction. Without knowing an author's intentions, it is difficult to determine whether content is true, untrue, or just bullshit.

Experiment 1 results align with Frankfurt's (1986) assertion that the bullshitter is not evaluated as negatively as the liar. Furthermore, mediational analyses suggested that the link between bullshitting and social evaluation, relative to lying, is bridged by greater estimates of ignorance, expressive intentions, relatively weaker speaker expectations of being taken seriously, and perceived attempts by the speaker to appear knowledgeable. The link also appear to be bridged by relatively lower estimates of deceptive intentions, dishonesty, or ulterior motives. Experiment 2 results are in line with Frankfurt's speculation regarding insidiousness as it demonstrated that both receptivity to common bullshit and attitudes are influenced more by known bullshitters than from known liars.

In this way, bullshitters and the bullshit they provide can be considered more insidious than liars and their lies containing the very same messages and content. In practice, if a colleague informs us "The important meeting is on Tuesday.", and we know the colleague to be a compulsive liar, we can be relatively more certain that the meeting is most definitely not on Tuesday than if we know the colleague to be a compulsive bullshitter. Thus, those who think they may have been lied to do not necessarily know something that those who think they have been bullshitted do not. Instead, those who think they may have been lied to are relatively more likely to know that the information they have been exposed to is likely to be false; this information is useful. In this case, their resulting belief is more certain, than those who think they have been bullshitted.

A unique source of bullshit is that which derives from medicine and alternative medicine. Research reported by Korownyk et al. (2014) found that fewer than half the recommendations on popular medically-relevant television talk shows are based on reliable evidence. But how would viewers respond if they knew the information was simply not true as opposed to considering that the information isn't necessarily false and that it could be true? Bullshit coupled with open-mindedness can be a recipe for disaster. Consider the persistence of the belief that the measles, mumps, and rubella vaccine is linked to autism and bowel disease, despite the fact that all such links have been discredited and retracted (Deer, 2020). Unfortunately, once people are convinced by bullshit and share their beliefs publicly, it is near impossible to dissuade them.

Limitations

Our participants were directly informed that the social targets either communicated bullshit or lies; this was necessary to directly test the reactions and influence of bullshit and lies. However, in practice, discerning bullshit from lies can be very difficult as both the bullshitter and liar can say the very same things and appear to be genuinely concerned with communicating the truth. It is unclear whether the effects demonstrated here extend to instances whereby social perceivers are not privy to the intentions of the bullshitter/liar, but we see no readily obvious reason to expect them to. That is, it seems that

the social perceiver's awareness of the intent of the communicator (i.e., bullshitting or lying) is required.

It is also worth noting the possibility that our results may differ with respect to the topic discussed by bullshitters and liars alike, whether it be issues in philosophy, politics, economics, or any of the major issues of the day. Because bullshit relative to lies made a difference for a seemingly bland and innocuous discussion topic (i.e., expressed beliefs and attitudes about daycare's impact on children), it is reasonable to expect the mode of communication to matter for more serious issues. However, future research would do well to investigate the dynamics of bullshitting and lying for multiple discussion topics.

Future Directions

The differences between bullshitting and lying, and the social perceptions of bullshitters and liars as studied here, do not serve as an exhaustive list. Future research would do well to investigate when, and under what conditions, people are most likely to lie, tell the truth, not pretend to know what they are talking about, or bullshit. At present, there is no empirical knowledge regarding the communicative functions, purposes, or intents of bullshitting. A better understanding of the many reasons in which people engage in bullshitting would provide important insights into bullshit detection and disposal.

In line with our reasoning, traits related to honesty and trustworthiness are characterized by profound asymmetries in the diagnosticity of trait-relevant behaviors; unfavorable traits are easily acquired but difficult to lose, whereas favorable traits are difficult to acquire but easy to lose (Rothbart & Park, 1986; Tausch, Kenworthy, & Hewstone, 2007). Specifically, Rothbart and Park (1986) have shown that very few dishonest or trustworthy behaviors (e.g., telling a lie) are necessary to declare that another person is dishonest or untrustworthy, but a relatively large number of honest and trustworthy behaviors are necessary to reverse such trait inferences. Thus, social perceivers appear to be readily willing to dismiss content received from liars. Because bullshitters are not necessarily lying when they bullshit, and often believe their own bullshit, social perceivers are less likely to dismiss content communicated by bullshitters than liars. If this is true, we would have yet another reason to conclude that the assimilative influence of bullshitters is greater than that of liars.

Conclusion

Our research indicates that the social consequences of bullshitting are relatively less severe to that of the social consequences of lying. Furthermore, bullshit appears to have a more potent impact on beliefs about what is true, and one's own attitudes, when the very same information comes from a bullshitter than a liar. These findings are profoundly important given that what people believe to be true has an incredibly important influence on attention, memory, and decision making (for a particularly convincing treatise, see: Alcock, 2018). To our knowledge, our research is the very first comparison of the differential impact of bullshit on beliefs relative to lies. Unfortunately, and consistent with Frankfurt's (1986) original conjecture, our data suggest that the social consequences of bullshitting are not as severe as those of lying. Thereby, people are not expected to inhibit their bullshit as greatly as they do lies. Further, a great deal of one's beliefs are often based on pure bullshit (Gardner, 1957; Randi, 1982; Sagan, 1995; Shermer, 1997, 2011). The lack of severe consequences and potentially greater frequency of bullshitting over that of lying, tripled with deleterious effects of bullshit on beliefs and attitudes relative to that of lies indeed leaves bullshit an insidious communicative substance.

A deeper understanding of bullshitting might be one of the single most important intellectual and social issues that we face. Altering the concern for truth, what is said and how it is being said are likely to be the most straightforward but significant means of improving the integrity and impact of empirical knowledge.

Declarations

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