When Truthiness Trumps Truth.

Epistemic Beliefs Predict the Accurate Discernment of Fake News

Jan P. Rudloff*, and Markus Appel

Psychology of Communication and New Media, Julius-Maximilians-Universität Würzburg,

Germany

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*Jan Philipp Rudloff

Julius-Maximilians-Universität Würzburg

Oswald-Külpe-Weg 82

97074 Würzburg (Germany)

Email: jan.rudloff@uni-wuerzburg.de

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Abstract

The widespread distribution of mis- and disinformation highlights the need to understand why individuals fall for fake news. Surprisingly, individuals' very understanding of knowledge and how it is created (epistemic beliefs) has received little attention in this context. We present a model focusing on the role of post-truth epistemic beliefs, their relationship to the Dark Factor of Personality (D), and their mutual association with fake news discernment. Based on a repeated measures experiment ($N = 668$), we show that individuals who endorse post-truth epistemic beliefs distinguish less between fake news and accurate news (fake news discernment). Further, D was linked to reduced fake news discernment, which is explained by a positive relationship with post-truth epistemic beliefs. Results remained virtually identical when ideology congruent and ideology incongruent news were considered separately. In conclusion, when addressing the global threat of fake news, epistemic beliefs need to be considered.

Keywords: Post-Truth, Epistemic Beliefs, Dark Factor of Personality, Fake News, Misinformation, Disinformation

General Audience Summary

The development of effective countermeasures against the distribution of mis- and disinformation, relies on knowledge as to which individuals are more likely to fall for fake news. People have different worldviews regarding facts and knowledge (*epistemic beliefs*). People differ in how much emphasis they put on evidence when evaluating the accuracy of information and how much they prioritize their intuition. Moreover, people have different views as to whether there are independent facts or whether "facts" are created by politicians. We assumed that individuals who prefer to trust their intuition, who put little emphasis on evidence and who think that facts are formed by those in power (*post-truth epistemic beliefs*) are particularly susceptible to fake news. Prior research has shown that these beliefs are connected to dark personality traits, more specifically the Dark Factor of Personality. People with a pronounced Dark Factor of Personality only act for their own benefit without caring for others and hold beliefs that justify their behavior. In an online experiment, we presented factually accurate and inaccurate news posts and asked participants to rate the accuracy of the news posts. Our results show that people with post-truth epistemic beliefs and a pronounced Dark Factor of Personality distinguished less between accurate and fake news. Based on our results, we recommend educating children and adolescents to develop sophisticated epistemic beliefs, which would help them differentiate between accurate and inaccurate news and more broadly, improve their ability to form opinions and to make decisions based on evidence.

When Truthiness Trumps Truth. Epistemic Beliefs Predict the Accurate Discernment of

Fake News

Major challenges to humankind such as climate change or COVID-19 have highlighted the need for academic research on the antecedents of accepting fake news (e.g., Lazer et al., 2018; Lewandowsky et al., 2020, Pennycook et al., 2020). Fake news are conceived here as fabricated and factually inaccurate information with a similar look and feel as journalistic contributions (e.g., Lazer et al., 2018). We argue that individuals' convictions about the nature and generation of knowledge (i.e., *epistemic beliefs*, Schommer, 1990) could be pivotal to understanding the acceptance of fake news (Hyman & Jalbert, 2017; Lewandowsky et al., 2017; Scheufele & Krause, 2019). Based on a three-dimensional framework of epistemic beliefs (Garrett & Weeks, 2017), we propose a model including the Dark Factor of Personality (Moshagen et al., 2018) as a predictor of post-truth epistemic beliefs and impaired discernment between fake news and accurate news as a consequence.

Epistemic Beliefs

Beliefs about the nature and generation of knowledge are often referred to as epistemic beliefs (Muis, 2007). In the social sciences, it is widely agreed upon that knowledge is always embedded in the historical and societal context, but that not all assertions or opinions are equally valid (e.g., Holtz, 2020; Lewandowsky, 2021; Popper, 1976/1969; Waisbord, 2018). In contrast to this position, strongly relativist, unbounded constructivist perspectives have surfaced, most prominently in the political realm (e.g., the notion of "alternative facts", see Lewandowsky, 2020; 2021). Our focus here is on epistemic beliefs as everyday people's worldviews about how one can and should construct knowledge and reality. Whereas motivated reasoning (Kruglanski, 1996; Kunda, 1990) is defined as the process of drawing conclusions based on the desired outcome, epistemic beliefs refer to one's general views on the concept of knowledge itself.

Research on epistemic beliefs complements alternative perspectives, for example work on

individual differences in analytic thinking (e.g., Bronstein et al., 2019; Pennycook & Rand,

2020). While the latter focuses on individual differences in the ability and disposition to think

rationally, our work emphasizes the role of higher-level cognitions and goals that fuel or inhibit

rational processing of information (Stanovich, 2011). Epistemic beliefs develop through

socialization and are thought to be relatively stable over time, but not fixed (Garret & Weeks,

2017; Schommer, 1990).

      Following Garrett and Weeks (2017), we distinguish between three aspects of epistemic

beliefs: First, *Faith in Intuition for Facts* refers to the degree to which individuals believe that

they should trust their gut feeling rather than evidence when judging the accuracy of information.

This aspect overlaps to a large extent with the notion of *truthiness*, popularized by comedian and

talk show host Stephen Colbert (Colbert, 2005). Although intuition can be a significant source of

knowledge (e.g., Damasio, 2005; Kahneman, 2011), it can lead to drastic misperceptions if it is

not complemented by analytic thinking (e.g., Swami et al., 2014). Second, *Need for Evidence*

refers to the degree to which people believe that their views need to align with externally

validated data. A low Need for Evidence increases susceptibility towards ideological convictions

contradicting the current scientific consensus (e.g., Garrett et al., 2016; Hindman, 2009). Third,

Truth is Political captures the degree to which people assume that facts are determined by those

in power, for example politicians, journalists, and scientists. In that sense, evidence is considered

to be nothing but a matter of power (Holtz, 2020; Garrett & Weeks, 2017).

      We consider a strong Faith in Intuition for Facts, a low Need for Evidence and a strong

conviction that Truth is Political as a set of *post-truth epistemic beliefs*. Prior research (Garrett &

Weeks, 2017) showed that lower education and lower need for cognition were associated with all

three post-truth epistemic belief components. Moreover, political conservatism was linked to the

endorsement of post-truth epistemic beliefs. Initial evidence further suggests that post-truth

epistemic beliefs are associated with the endorsement of COVID 19 conspiracy theories (Rudloff

et al., 2022). Research based on a different but related belief framework (Lewandowsky, 2021)

further showed that the beliefs that truth is not knowable and that knowledge sources are

unreliable, as well as the prioritization of intuition were associated with higher conspiracy

mentality (Imhoff & Buder, 2014), a stronger need for chaos (Arceneaux et al., 2021), and the

perception that scientists are more divided on issues (e.g., vaccinations).

The Dark Factor of Personality (D) and Epistemic Beliefs

Recent theoretical and empirical work has introduced the *Dark Factor of Personality* (D)

as the common core of dark traits such as Machiavellianism, psychopathy, and narcissism (e.g.,

Bader et al., 2021; Hartung et al., 2021; Moshagen et al, 2018). D is defined as "the general

tendency to maximize one's individual utility — disregarding, accepting, or malevolently

provoking disutility for others —, accompanied by beliefs that serve as justifications" (Moshagen

et al., 2018, p. 657). Utility can be understood as any form of material success, but it also refers

to hedonistic feelings such as power or pleasure.

Embracing a relativist and cynical worldview enables individuals with high levels in D to

twist morals and to disregard norms, whenever it is beneficial to their agenda (e.g., Jonason et al.,

2015; Moshagen et al, 2018; Moshagen et al., 2020; Zeigler-Hill et al., 2020). As facts may be an

obstacle to maximizing one's own utility, we assume that post-truth epistemic beliefs function as

a means to construct and maintain a self-serving worldview that defies arguments, injunctive

norms or scientific evidence. Indeed, D was positively associated with post-truth epistemic

beliefs (Rudloff et al., 2022). D as well as individual dark traits such as Machiavellianism,

narcissism, and psychopathy were further related to the endorsement of conspiracy theories

(Ahadzadeh et al., 2021; Douglas & Sutton, 2011; Kay, 2021; Rudloff et al., 2022). Some (but

not all) studies show that scores on dark traits increase with a more conservative, right-wing political orientation (e.g., Arvan, 2013; Jonason, 2015; Vize et al., 2018).

Fake News Discernment and the Current Study

The contribution of D and post-truth epistemic beliefs with respect to accepting and spreading disinformation and other incivil behavior online remains to be addressed. The focus of our study was on post-truth epistemic beliefs as a predictor of the processing of information, more specifically, of lower fake news discernment scores (e.g., Pennycook & Rand, 2019). Following from the theory and research outlined in the previous sections, we assumed that the more individuals endorse post-truth epistemic beliefs, the lower their willingness as well as their ability (given limited practice) to base their judgments on evidence. As a consequence, information that could signal that news are inaccurate are disregarded by individuals with pronounced post-truth epistemic beliefs. This should result in negative associations between post-truth epistemic beliefs and the correct distinction between fake and accurate news. We further argue that individuals with high levels in D use post-truth epistemic beliefs to approve or reject information based on their individual utility (rather than assessments of truth or truthfulness). As a consequence, the higher D, the worse participants should perform on tasks that require discerning between factually accurate and inaccurate news.

Based on these assumptions, a mediation model is proposed and tested (see Figure 1). We used a repeated measures experimental design in which the accuracy of news posts (accurate vs. fake) was manipulated within subjects. This model includes the three epistemic belief factors as mediating variables. It further includes a residual association between D and fake news discernment.

Figure 1

The Proposed Mediator Model with Fake News Discernment as the Dependent Variable.
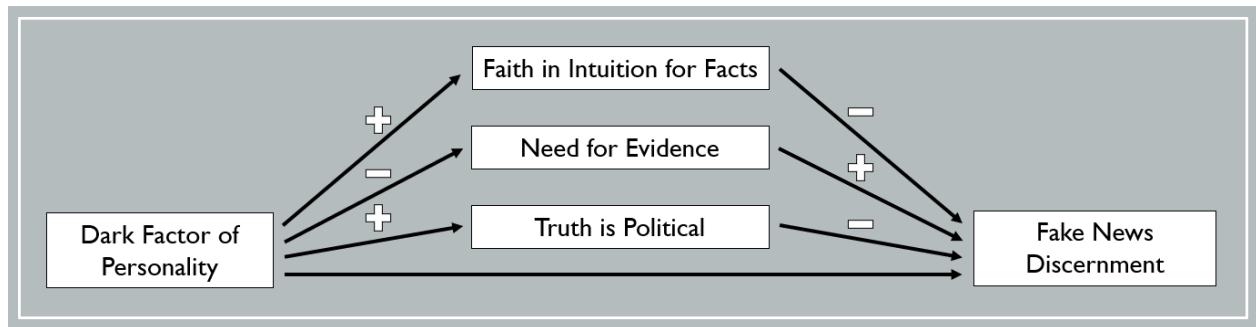
Theory and research further suggest that individuals could be particularly susceptible to mis- and disinformation that align with pre-existing convictions, for example news in favor of their political views (e.g., Kahan, 2013). Thus, we aimed at testing whether the model holds for all news or only news that are ideology congruent or incongruent. To this end, the political stance of the posts (pro-Democrat vs. pro-Republican) served as a second factor that was manipulated within subjects (see Kim & Dennis, 2019; Pennycook et al., 2020; Pennycook & Rand, 2019, for similar approaches).

Method

We report how we determined our sample size, all data exclusions, and all measures in the study, and we follow the Journal Article Reporting Standards (JARS; Kazak, 2018). All data, analysis code and research materials are available at https://osf.io/kqyrj/?view_only=19921fe1a66145c6883bcf3376f9734c. Our study was preregistered (https://aspredicted.org/33C_LT1) and has been approved by the internal review board of our institution.

Participants

An analysis with G*Power (Faul et al., 2009) yielded a required sample size of 193

participants for detecting an association of $r = .20$, with $\alpha = .05$ and power $= .80$. Given that

additional analyses on political stance and ideology congruence were planned, we aimed for at

least 500 participants. We intended to invite 700 MTurk participants (U.S. residents with good

English proficiency) to account for potential exclusions. A total of 821[1] participants completed

the questionnaire on October, 29 – 30, 2020, and received 1.50$ (participants required an

approval rating of 97% or higher and a minimum of 1,000 previous tasks). The following

exclusions were made: First, 74 participants were excluded because they deployed a VPN/VPS or

a proxy to hide their country of access and/or failed to adequately describe the study in English

indicating they were either not native speakers or bots or careless responders (Kennedy et al.,

2020). Another 57 participants were excluded because they failed to respond appropriately to at

least one of our control questions (e.g., "This is a control item. Please choose "Very unlikely".";

see Table S3). Additionally, participants were asked to indicate both their year of birth as well as

their current age. We excluded 17 participants because of an incongruity between the two pieces

of information, which implied inattentive or careless responding (Kennedy, et al., 2020).

Additionally, five participants were excluded due to extremely low response times of less than

180 seconds (Huang et al., 2012). See S3 of the supplement for more details on the exclusion

criteria. The final sample comprised 668 participants ($M = 38.90$ years, $SD = 11.66$ years, 18-78

years, 44.5 % female). With regard to educational attainment, 32.9 % had a high school diploma,

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[1] Due to technical issues at the interface between the software used to create our experiment (Qualtrics and
Mechanical Turk), the number of participants having completed the questionnaire was bigger than planned.

50.1 % had a bachelor's degree, 12.7 % had a master's degree, and 1.9 % a Ph.D., while 2.2 %

completed some high school or trade school.

Stimuli Selection: Pilot Study

The selection of the stimuli was based on a pilot study that is reported in detail in

Supplement S1. Prior to the pilot study, we assembled 32 news posts, half were accurate news

posts, half were fake news posts. Our factually accurate news posts were retrieved from US news

sources and the accuracy of their content was carefully double-checked either by referring to

Snopes or *Politifact* (third-party fact-checking websites) or by matching the content with at least

one additional credible source. For the factually inaccurate news posts, we also relied on *Snopes*

and *Politifact*, who had flagged these news posts as fake news. Reflecting the composition of

fake news found on social media, the fake news posts involved different variants of fabrication,

some contained or alluded to conspiratorial ideas. Following prior research (e.g., Pennycook &

Rand, 2019; Bago et al., 2020), half of the accurate and half of the fake news posts were

favorable for the Democratic Party (= pro-Democrat), the other half was favorable for the

Republican Party (= pro-Republican). The news posts were created in a format identical to that of

Facebook posts (i.e., a post with an associated photograph above it as well as a headline and

teaser below it; see Supplement S2). The pilot study participants (55 MTurk respondents) rated

the stimuli according to their perceived accuracy (on a 7-point scale from *very inaccurate* to *very*

accurate), perceived political stance (on a 7-point scale ranging from *very pro-Democrat* to *very*

pro-Republican), and familiarity. We selected a set of 12 rather unfamiliar stimuli for the main

study, 1.8 % to 16.4 % of the pilot study participants stated they had encountered them before.

For the selected news posts, pilot study participants could distinguish correctly on average

between accurate news (perceived accuracy: $M = 3.68$, $SD = 0.76$) and fake news (perceived

accuracy: $M = 2.96$, $SD = 1.16$), $t(54)= 6.18$, $p < .001$, $d = 0.83$. Pilot study participants further

distinguished between pro-Democrat (political stance: $M = 3.06$, $SD = 1.05$) and pro-Republican

stimuli (political stance: $M = 5.12$, $SD = 0.83$), $t(54) = 11.88$, $p < .001$, $d = 1.60$.

Main Study Stimuli and Fake News Discernment Measure

In the main study, we presented six accurate news posts and six fake news posts. In each

category, three posts were pro-Democrat, three were pro-Republican (see Table 1). Our stimuli

covered a wide range of contemporary political topics (excluding COVID-19 - related issues, as

the factual knowledge on COVID-19 was comparably volatile when the main study was

conducted). All stimuli can be found in the supplement S2. For each of the 12 news posts,

participants were asked to indicate how accurate they perceived the news post to be, using a 7-

point scale that ranged from *very inaccurate* (1) to *very accurate* (7, item wording: "To the best

of your knowledge, how accurate is the claim in the news headline above?").[2] Fake news

discernment scores were calculated by subtracting the average ratings of fake news posts from

the average ratings of accurate news posts. Similar stimuli and measurements were used in prior

research on fake news (e.g., Kim & Dennis, 2019; Pennycook et al., 2020; Pennycook & Rand,

2019).

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[2] We also assessed participants' willingness to share the news posts and performed the same analyses with fake news discernment for willingness to share as the dependent variable. Both dependent variables correlated substantially ($r = .48$). The results on willingness to share are highly similar to the reported results on perceived accuracy. See S5 of the Online Supplement for a detailed report.

Table 1

Example Stimuli for All Types of News Posts

Accuracy	Political stance	Headlines
Accurate	Pro Democrat	"Trump's first 3 years created 1.5 million fewer jobs than Obama's last 3
	Pro-Republican	"Trump signs bi-partisan expansion of $1.8 billion in autism funding act"
Fake	Pro-Democrat	"Head of Catholic Church says those who own weapons are "hypocrites", not Christians"
	Pro-Republican	"Americans' health deteriorating under Obamacare as life expectancies plunge"

Note. Headlines were presented with an associated photograph above it as well as a teaser below it.

Epistemic Beliefs, D, and Political Affiliation

After the stimuli were presented and rated, the trait measures were presented. We used a 12-item questionnaire by Garret and Weeks (2017) to assess the three subscales of epistemic beliefs: Faith in Intuition for Facts (e.g., "I trust my gut to tell what's true and what's not", α = .91), Need for Evidence (e.g., "Evidence is more important than whether something feels true", α = .86) and Truth is Political (e.g., "Facts depend on their political context", α = .89). Each subscale consisted of four items that were answered on a 7-point scale reaching from *strongly disagree* (1) to *strongly agree* (7).

We used the D16 short version (Moshagen et al., 2020) to assess the Dark Factor of Personality. It comprises 16 items that were answered on a 7-point scale reaching from *strongly disagree* (1) to *strongly agree* (7) (e.g., "My own pleasure is all that matters", α = .78).

Further, we asked participants whether they self-identified as Democrats ($n = 302$),

Republicans ($n = 166$) or Independents ($n = 200$).[3] After all measures were completed,

participants were thoroughly debriefed, including information as to which of the 12 news posts

contained factually inaccurate information.

Results

On average, accurate news posts were rated as more accurate ($M = 3.72$, $SD = 0.92$) than

fake news posts ($M = 2.70$, $SD = 1.06$), $t(667) = 22.69$, $p < .001$, $d = 0.88$. In line with prior

research by Pennycook and Rand (2019), we found effects of party affiliation (Democrat,

Independent, Republican) on the discernment between (pro-Democrat and pro-Republican) fake

and accurate news. Democrats (discernment score: $M_{Diff} = 1.42$; $SE_{Diff} = 0.07$) were better at

discerning fake from accurate news than Independents ($M_{Diff} = 0.84$; $SE_{Diff} = 0.09$) and

Republicans ($M_{Diff} = 0.004$; $SE_{Diff} = 0.09$), all $p < .001$. See Supplement S7 for a detailed report of

related mixed ANOVA results.

For our parallel multiple mediation analyses we used PROCESS version 3.4.1 (Hayes,

2018). The three epistemic belief subscales were included as simultaneous mediators. Predictor

variable D was modeled as influencing the dependent variable fake news discernment directly

and indirectly through the three mediator variables (Hayes, 2018). All path coefficients, standard

errors, and p-values are presented in Figure 2. There was a significant total effect of D on fake

news discernment, $B = -.24$, $SEB = .04$, 95%CI [-.32; -.15], $p < .001$, showing that individuals

high in D differentiate less between accurate and fake news posts. Importantly, Faith in Intuition

for Facts, Need for Evidence, and Truth is Political predicted fake news discernment in the

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[3] We also assessed participants' political orientation using a 7-point scale ($M = 3.51$, $SD = 1.86$) reaching from *extremely left* (1) to *extremely right* (7). See S4 of the Online Supplement for the zero-order correlations with all continuous variables.

expected directions. D was significantly associated with all epistemic belief subscales, which led

to significant indirect effects for Faith in Intuition for Facts, B = -.03, SEB = .01, 95%CI [-.05; -

.01], for Need for Evidence, B = -.06, SEB = .02, 95%CI [-.09; -.03], and for Truth is Political, B

= -.09, SEB = .02, 95%CI [-.13; -.05]. Our results show that post-truth epistemic beliefs predict

impaired fake news discernment and further explain the link between D and impaired fake news

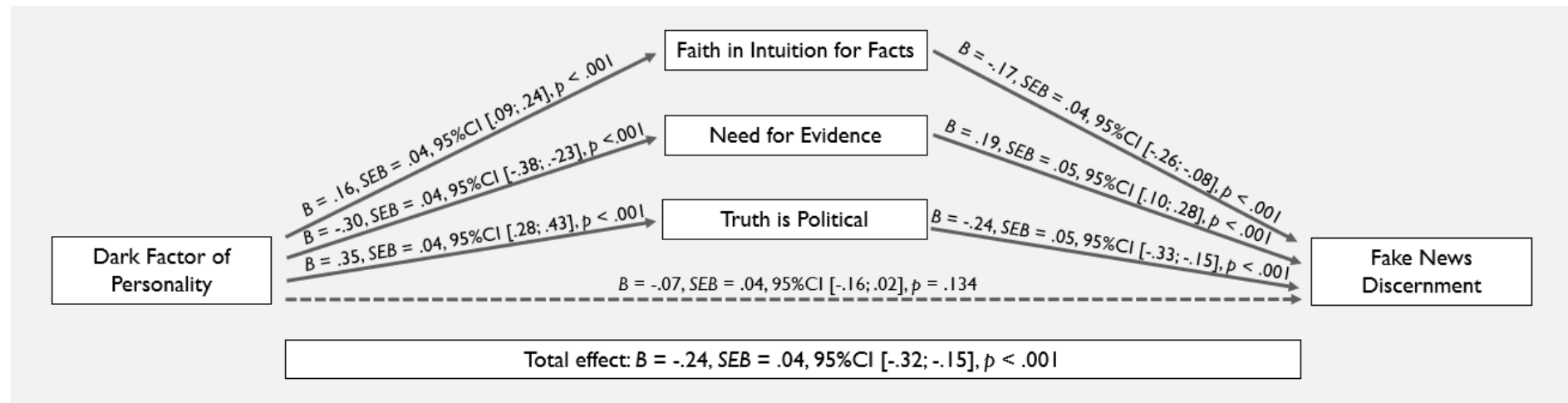discernment.

Ideology Congruence and Political Orientation

For the analyses of ideology congruence, the subsample of Independents (n = 200) was

excluded as our stimuli were either pro-Democrat or pro-Republican, leaving us with 468

participants. Participants were better at discerning ideology congruent accurate and fake news

(M_{Diff} = 1.02, SD_{Diff} = 1.44) than ideology incongruent ones (M_{Diff} = 0.82, SD_{Diff} = 1.47), $t(467)$ =

4.72, p < .001, d = 0.23. We performed the same mediation analyses separately for ideology

congruent and incongruent stimuli to explore whether the associations between D, epistemic

beliefs and fake news discernment differ depending on whether or not an individual's party

affiliation matches the political stance of the news posts. Figure 3 shows all path coefficients,

standard errors, and p-values. Note that all significant associations found across the stimuli could

also be observed when considering ideology congruent and incongruent items separately. This

also applied to the indirect effects. For ideology congruent news posts, we found indirect effects

for Faith in Intuition for Facts, B = -.03, SEB = .01, 95%CI [-.06; -.01], for Need for Evidence, B

= -.08, SEB = .02, 95%CI [-.12; -.04], and for Truth is Political, B = -.09, SEB = .03, 95%CI [-

.16; -.03]. For ideology incongruent news posts, we also found indirect effects for Faith in

Intuition for Facts, B = -.03, SEB = .01, 95%CI [-.07; -.01], for Need for Evidence, B = -.07, SEB

= .02, 95%CI [-.13; -.03], and for Truth is Political, B = -.11, SEB = .03, 95%CI [-.18; -.05]. Our

results show that the effects of D and post-truth epistemic beliefs apply to both ideology

congruent and incongruent fake news discernment, speaking to the robustness of our findings.

We followed a similar approach by examining our model for self-ascribed Democrats (n =

302) and self-ascribed Republicans (n = 166) separately (see also Supplement S6). For the

Democrats, we found that the link between D and fake news discernment was significantly

mediated by the epistemic belief factors Faith in Intuition for Facts, B = -.05, SEB = .02, 95%CI

[-.08; -.01] and Need for Evidence, B = -.08, SEB = .03, 95%CI [-.13; -.03], whereas Truth is

Political was no significant mediator, B = -.04, SEB = .03, 95%CI [-.10; .02]. For Republicans, a

different picture emerged. The link between D and fake news discernment was mediated by Truth

is Political, B = -.09, SEB = .03, 95%CI [-.16; -.03], but neither by Faith in Intuition for Facts, B

= .00, SEB = .01, 95%CI [-.01; .02], nor by Need for Evidence, B = -.02, SEB = .02, 95%CI [-.06;

.01]. Results per party affiliation that did not follow our general model were mainly based on a

missing link between the respective epistemic belief component and fake news discernment. The

hypothesized associations between D and the epistemic beliefs were observed for Republicans

and for Democrats, except for the link between D and Faith in the Intuition for Facts among

Republicans. Thus, whereas the general model linking D, epistemic beliefs, and (a lack of) fake

news discernment holds for Democrats and Republicans, our results also suggest that different

post-truth epistemic belief subcomponents are relevant for these subgroups.

Figure 2

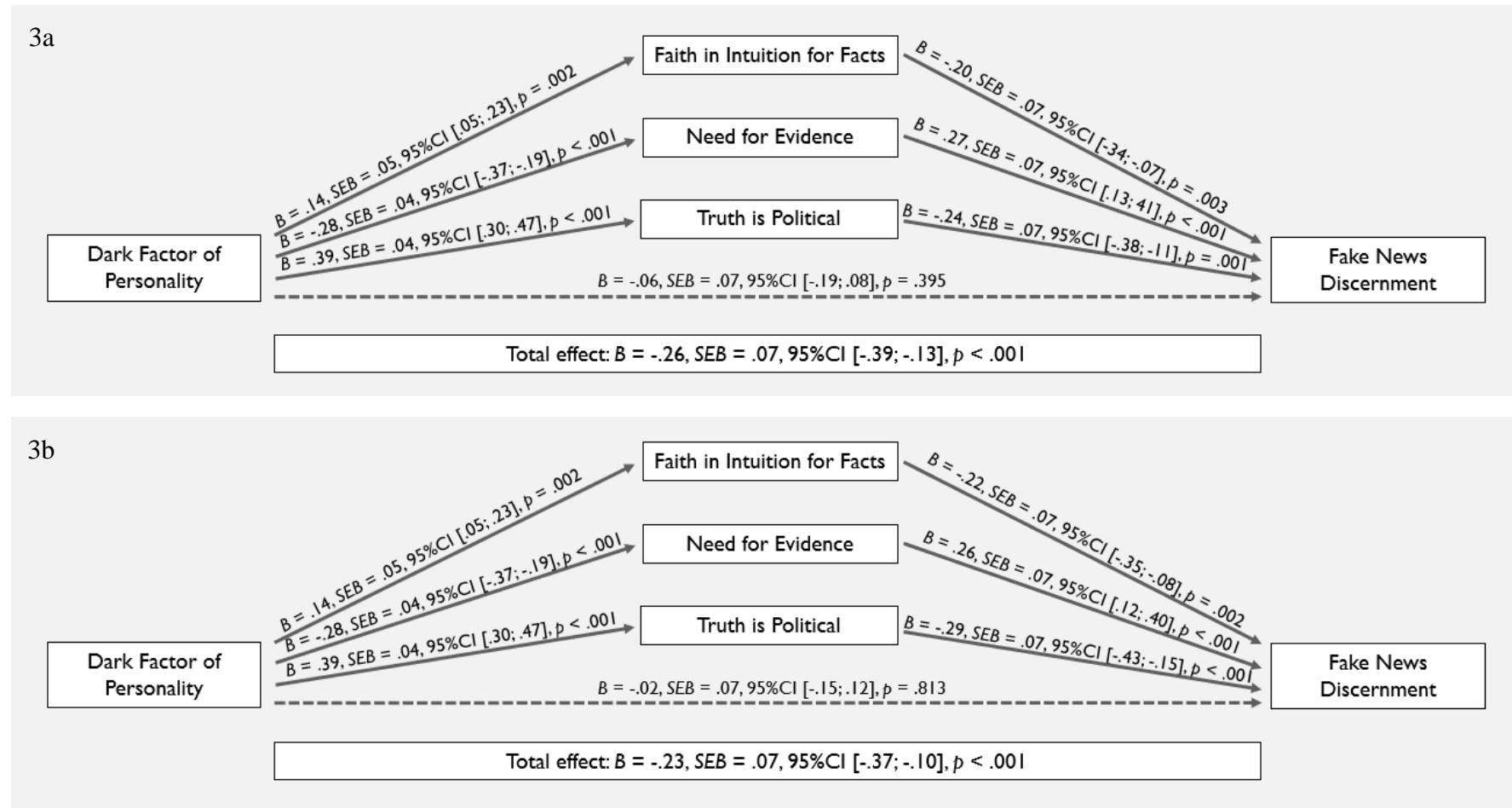*Main Results of the Parallel Mediator Model with Fake News Discernment as the Dependent Variable*

Note. N = 668. Solid paths indicate significant associations (*p* < .05), dashed paths indicate non-significant associations.

Figure 3

Main Results of the Parallel Mediator Models with Fake News Discernment for Perceived Accuracy for Ideologically Congruent Stimuli (3a) and Incongruent

Stimuli (3b)

3a

Dark Factor of Personality → Faith in Intuition for Facts: B = .14, SEB = .05, 95%CI [.05; .23], p = .002

Dark Factor of Personality → Need for Evidence: B = -.28, SEB = .04, 95%CI [-.37; -.19], p < .001

Dark Factor of Personality → Truth is Political: B = .39, SEB = .04, 95%CI [.30; .47], p < .001

Faith in Intuition for Facts → Fake News Discernment: B = -.20, SEB = .07, 95%CI [-.34; -.07], p = .003

Need for Evidence → Fake News Discernment: B = .27, SEB = .07, 95%CI [.13; .41], p < .001

Truth is Political → Fake News Discernment: B = -.24, SEB = .07, 95%CI [-.38; -.11], p = .001

Dark Factor of Personality → Fake News Discernment: B = -.06, SEB = .07, 95%CI [-.19; .08], p = .395

Total effect: B = -.26, SEB = .07, 95%CI [-.39; -.13], p < .001

3b

Dark Factor of Personality → Faith in Intuition for Facts: B = .14, SEB = .05, 95%CI [.05; .23], p = .002

Dark Factor of Personality → Need for Evidence: B = -.28, SEB = .04, 95%CI [-.37; -.19], p < .001

Dark Factor of Personality → Truth is Political: B = .39, SEB = .04, 95%CI [.30; .47], p < .001

Faith in Intuition for Facts → Fake News Discernment: B = -.22, SEB = .07, 95%CI [-.35; -.08], p = .002

Need for Evidence → Fake News Discernment: B = .26, SEB = .07, 95%CI [.12; .40], p < .001

Truth is Political → Fake News Discernment: B = -.29, SEB = .07, 95%CI [-.43; -.15], p < .001

Dark Factor of Personality → Fake News Discernment: B = -.02, SEB = .07, 95%CI [-.15; .12], p = .813

Total effect: B = -.23, SEB = .07, 95%CI [-.37; -.10], p < .001

Note. n = 468. Solid paths indicate significant associations (*p* < .05), dashed paths indicate non-significant associations.

Discussion

Fake news are a cause for concern for democratic societies worldwide (Lazer et al., 2018; Lewandowsky et al., 2017). Thus, it is crucial to disentangle the contributing factors to an increased susceptibility to fake news. We found support for our comprehensive model emphasizing the role of post-truth epistemic beliefs, their relationship to the Dark Factor of Personality as their antecedent, and fake news discernment as a consequence. Our study yields four important results: First, post-truth epistemic beliefs, that is, a strong Faith in Intuition for Facts, a low Need for Evidence, as well as the strong conviction that Truth is Political, predict impaired fake news discernment. Thus, general worldviews regarding the nature and generation of knowledge translate into a specific handling of news. This finding complements existing research on analytic thinking (e.g., Pennycook & Rand, 2019) by emphasizing epistemic beliefs as a basic factor contributing to the engagement in a rational processing of information or a lack thereof (Stanovich, 2011). Second, individuals high in D, who are striving towards maximum individual utility, distinguish less between accurate and fake news. For these individuals, assessing the accuracy of news based on actual evidence could interfere with maintaining a worldview that serves their agenda as well as their self-concept. Third, we corroborate prior research by Rudloff et al. (2022) showing that individuals high in D tend to hold post-truth epistemic beliefs. Epistemic beliefs explain the link between D and impaired fake news discernment. This provides support for our assumption that these individuals deploy post-truth epistemic beliefs to evaluate the accuracy of news posts based on their individual utility. Fourth, all of our hypothesized associations remain significant for both ideology congruent and incongruent news, but the roles of the three epistemic belief aspects seem to vary for Democrats and Republicans.

Regarding ideology congruence, we do not suggest that there is no effect of ideology congruence on the accuracy ratings of news posts. As pointed out by Gawronski (2021), no difference in discernment scores between two groups does not necessarily mean that the

processing and handling of news is not influenced by ideology congruence as ideology congruence increases both perceived accuracy ratings for accurate and fake news whereas ideology incongruence reduces ratings for both types of news. Discernment scores do not distinguish between high ratings for both accurate and fake news or low ratings for both. In fact, our mixed ANOVA results reported in the Online Supplement (S7) show that ideology congruence *did* influence participants' judgment of news, to the effect that ideology congruent news were perceived to be more accurate than ideology incongruent news.

When the results of Democrats and Republicans were analyzed separately, different post-truth epistemic belief subcomponents were predictive of fake news discernment for these groups and D was not associated with Faith in the Intuition for Facts among Republicans. These additional analyses were based on rather small subsamples (e.g., 166 Republicans) and MTurk participants may not perfectly reflect the electorate (e.g., Huff & Tingley, 2015). Still, future research is encouraged to examine potentially different roles of epistemic beliefs in the dissemination and processing of accurate and inaccurate information depending on political orientation.

Our research highlights a major potential obstacle to rational communication: Some peoples' deliberate worldviews about how they can and should gain knowledge are fueled by a general prioritizing of individual utility. In other words, not everyone adheres to "the unforced force of the better argument" (Habermas, 1996, p. 305). Given our results, efforts should be made to counteract the development of post-truth epistemic beliefs. We encourage future research on *epistemic literacy* that reflects the opportunities and challenges of rational argumentation and discourse as part of societies' combat against fake news. Altering the epistemic beliefs of those with a pronounced dark personality will be particularly difficult as their beliefs exclusively serve to increase individual utility. Reducing the scope of environments in which endorsing post-truth epistemic beliefs proves to be more useful in

increasing one's individual utility than relying on argument quality and evidence could be a key to altering post-truth epistemic beliefs held by individuals with a dark personality.

There are several limitations that point at perspectives for future research. First, we relied on news posts as stimuli instead of full news articles. Although this approach has been used repeatedly in prior research and is widely accepted within the scientific community (e.g., Kim & Dennis, 2019; Pennycook et al., 2020; Pennycook & Rand, 2019) we encourage future research to investigate whether the found associations can be observed when using full news articles. Second, the relationship between D and epistemic beliefs was examined cross-sectionally, so caution is advised with regard to concluding causality. Although, it is much more likely that stable personality traits such as D influence epistemic beliefs than the other way round, additional research is needed to empirically corroborate causality. On a related note, we acknowledge that not all variables potentially involved in the link between D and fake news discernment were included in our study. For example, individuals high in D may be inclined to engage in purposefully misreporting their veracity assessment of the news posts. Third, our focus was on information processing in terms of fake news discernment. The nexus of D and post-truth epistemic beliefs could be a relevant force underlying related phenomena as well. Connecting our perspective to recent theory and research on shock and chaos disinformation (e.g., Arceneaux et al., 2021; Lewandowsky, 2020; 2021; Vargo et al., 2018), we suggest that individuals high in D use post-truth epistemic beliefs to justify the dissemination of erratic and self-contradictory information. Even if this information does not provide a viable epistemic alternative to (scientific) knowledge and evidence, it may disrupt the information processing of others as well as societal discourse.

Conclusion

We present first evidence for the crucial role of post-truth epistemic beliefs in the processing of fake news as they lead to a diminished discernment between accurate and fake news posts. This opens up new avenues with regard to counteracting fake news: Considering

how crucial they are to the interpretation of knowledge, promoting the development of

sophisticated epistemic beliefs emphasizing the significance of evidence in children and

adolescents as well as shifting those of adults could be of vital importance in the global combat

against mis- and disinformation.

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