Andrew Weiss
Manchester Metropolitan University, Manchester, United Kingdom

Souvick Ghosh
San Jose State University, San Jose, CA, United States

Frances Johnson
Manchester Metropolitan University, Manchester, United Kingdom

EXPLORING DEHUMANIZATION AND INFRAHUMANIZATION AS UNDERLYING FACTORS IN MISINFORMATION BELIEF AND SPREAD

Abstract

An examination of the literature in misinformation research shows a gap in the area of dehumanization and the related phenomenon of infrahumanization, each of which demonstrates how individuals reduce the human characteristics of others in blatant or subtle ways. This paper examines dehumanizing and infrahumanizing behavior as potential motives and user characteristics in the spread of and belief in misinformation. It is theorized that attitudes expressed against outgroup members reflect the degree to which one infrahumanizes others, with the result that one might more willingly believe and spread misinformation about a targeted outgroup. This paper contributes to the literature in its suggestion of a novel and understudied area in misinformation, identifying key concepts and important considerations for advancing the field of misinformation studies.

Keywords: Misinformation | Dehumanization | Infrahumanization | Information behavior

I. Introduction

Scholarly interest in misinformation as an online phenomenon has increased greatly over the past ten years, often being characterized in crisis terms (e.g. infobesity, infodemic, information disorder) due in part to the psychological and sociological impacts noticed in the wider world (Wardle and Derakhshan, 2017) (Sadiq and Saji, 2024), including anti-democratic movements (Ospina, et al., 2023), scientific and health skepticism (Kim and Kim, 2020)(Chowdhury, et al., 2021) (Moser, 2024), and extremist behaviors (Valenzuela, et al., 2019). Misinformation, defined as the sharing of false and misleading information with others online (including fake news, false narratives, and conspiracy theories), is seen as a problem affecting the trust that people hold in the institutions and organizations they exist and operate within (Lee, 2024) as well as a deeper problem that impacts the epistemological foundations of justified belief itself (Rapanta, 2024) (Harsin, 2015).

To understand the root of misinformation spread among information users, many researchers posit that the presence of certain personality traits increase the likelihood of using or sharing misinformation (Talwar, et al., 2019) (Pennycook and Rand, 2020). Personal identity, in-group identification, authoritarianism, and religious extremism have further raised the stakes, framing belief in and the spread of misinformation in terms of latent violence expressed through anger-inspired lies and perceived threats stemming from members of targeted outgroups (Ospina, et al., 2023).

One area that has largely remained understudied in misinformation literature is dehumanization, found to be common among those scoring higher on the Right- and Left-Wing Authoritarian measurement scales. Its subtler counterpart, infrahumanization, has not heretofore been explicitly linked in the literature to the belief in and sharing of misinformation. Dehumanization, as a general inquiry of study, focuses on the way in which members of a particular in-group will blatantly deny the human characteristics of those in outgroups; similarly, infrahumanization, a term used to define subtler day-to-day dehumanizing of others, denies the secondary emotions (i.e. shame, guilt, compassion) of those in an outgroup while overestimating these emotions for those in their group (Leyens, 2001).

In this conceptual paper, we examine dehumanization and infrahumanization, outlining their need to be studied more widely within the context of believing and sharing misinformation. The research aims to examine whether the dehumanization of others, and specifically the infrahumanization that occurs in daily life against others in an outgroup, would increase the likelihood of sharing certain types of misinformation about outgroups with others. Understanding the role of dehumanization in the belief in and sharing of misinformation will improve the efficacy of combating deleterious effects on the wider culture. Examining dehumanization also provides new directions for future research into how and why people come to believe certain types of misinformation.

II. Misinformation in the literature

The limits of information literacy and information behavior in studying misinformation

LIS research has tended to view misinformation as a problem to be approached and alleviated through the lens of information literacy (IL), suggesting tools such as the CRAAP test, educational programs, and case studies as best practices for combating its effects (Fister, 2021) (Liu, 2021) (George and Aasi, 2024). Allard and Clavien (2024) provide a deeper discussion of the issues of information literacy within a context of epistemic integrity, arguing that truly imparting IL to students requires training them in basic epistemic skills, including metacognitive competencies, the capacity to use and understand heuristics, basic statistical and methodological principles, and instilling humanistic values. Education level and information literacy are often hypothesized as necessary factors in the overall resistance to misinformation (Allcott & Gentzkow, 2017) (van Prooijen, 2017) (Dutton & Fernandez, 2019). Those more educated were identified in these studies to be more resistant to false information. But these findings do not address other factors that affect people’s decision making, or they assume the models of

purposeful acquisition of information as theorized in human information behavior (HIB). Indeed, Walton, et al's (2022) study suggests that education level is *not* the primary factor in believing misinformation; instead, a person's level of 'information discernment,' a variable far more indicative of a person's actual *engagement* with the specific information itself, provides a better explanation of its spread.

Regarding information behavior, as Wilson (2000) argues, the discipline looks at the behavior related to seeking, searching, and using information, each with specific aims and purposes. Seeking behavior is based on a specific need found within the individual. Dervin's (1996) conceptualization of *sense-making* posits ordinary individuals as central "theorists" constructing their own ideas and understanding of their personal worlds. Savolainen (2017), however, points out a need for wider approaches that look into root causes, secondary triggering factors, and external drivers.

In the context of misinformation, the accidental encountering and acquisition of information appears to better describe online user behavior. Non-linear, non-rational approaches to studying information behavior better capture the possible personality traits of the individual information user. Montesi and Álvarez Bornstein (2017) find that information seeking is an identity creation activity, subject to changes in social position; decisions are made based on non-rational criteria and guided by emotions, corporeality, and affect. Personal identities and group identification are similarly strong indicators of beliefs and political affiliations (Facciani and Steenbuch-Traberg, 2024). Ogasawara's (2019) look at Japanese right-wing extremists focuses on the creation of personal identities through the online chatroom experience. Montesi (2021) argues that non-rational factors guide people's judgment about the information they consume on a day-to-day basis. Osatuyi and Dennis (2024) explore weak ties, a component of the accidental avoidance of human information behavior, drawing further connections between the non-linear, irrational and non-purposive seeking of information and the epistemic problems associated with misinformation.

It is thus evident that the context of information behavior in relation to misinformation is more complex than assumed. Multiple individual traits influence and impact the type of information being encountered, sought after, accepted or rejected, and processed cognitively. It is precisely this context, and the studies that point to emotion, affect, and other influences impacting on information use, that question the assumptions that information literacy instruction and the purposeful acquisition of information will each lead to improved misinformation outcomes. Alternatively, self-identification and the study of information behavior as an identity-creation activity may provide insight into how and why users become receptive to certain types of misinformation and whether or not they are likely to engage in analytical and critical thinking when sharing it with others.

The personal characteristics of information users and susceptibility to misinformation

Identifying personal characteristics of misinformation users is explored by examining the relation to theories and models that explain the use of and interaction with information. Nan, et

al. (2022) find that a large array of characteristics – up to 46 in their study – have been shown to play important roles in the information user's tendency to share fake news. Some of these, including online trust (Wenger, 2000)(Schoorman, et al., 2007), the fear of missing out (FOMO) (Alt, 2015), social comparison (Cramer et al., 2016), and social media fatigue (Eppler and Mengis (2004) have been studied extensively and have been shown to be important information-user centered factors contributing to the spread of misinformation (Talwar, et al., 2019) (Weiss, et al., 2021). Pennycook's wide-ranging seminal work in misinformation focuses on several important foundational cognitive psychological traits of information users, including "cognitive modes of thinking" and "overclaiming" (Pennycook and Rand, 2020), overconfidence via Dunning-Kruger effect (Pennycook, et al., 2017), reliance on emotion (Martel, et al., 2020), and the issues of reduced analytic thinking associated with delusionality, dogmatism, and religious fundamentalism (Bronstein, et al., 2019). These characteristics provide researchers with a large palette to choose from, but also suggest that some characteristics need to be more clearly identified and isolated from external influencing factors.

The role of authoritarianism in misinformation spread

Within the study of self-identification and political affiliation is the examination of extremist thinking and why some people become more authoritarian in their political or religious beliefs. Authoritarianism examines the psychological processes and situational factors that contribute to the desire for people to limit the autonomy of others (Osborne, et al. 2023). Overall, authoritarianism is theorized as the behavior of obeying high-status leaders from advantaged groups that have the power to punish marginalized groups seen as threatening to in-group values. Research has prioritized examining right-wing political views, especially through the Right-Wing Authoritarianism (RWA) scale (Altemeyer, 1998) (Zakrisson, 2005) (Cross, et al., 2010). There is also evidence of authoritarianism in left-wing politics (Osborne, et al. 2023) (Costello, 2022), and merits further investigation through the Left-wing Authoritarian Index (Costello and Patrick, 2023). Authoritarianism is also linked to Social Dominance Orientation (SDO), which results in cohesion, stability, and hierarchy but also disagreeableness and an increased susceptibility to exploitation. Both RWA and SDO are found to increase the dehumanization of immigrants (Markowitz and Slovic, 2020), belief in conspiracy theories (Dyrendal, et al., 2021) (Richey, 2017), resistance to climate change (Choma, et al., 2024) (Stanley, et al., 2017), and science denial and skepticism (Kerr and Wilson, 2021).

Authoritarianism is also associated with much lower cognitive engagement and the uncritical acceptance of information (Osborne, 2023), associated with the need for 'epistemic certainty' in the form of closure (Van Hiel, et al, 2004), closed-mindedness (Berggren, et al., 2019), or cognitive inflexibility (Cuevas, et al., 2022) (Zmigrod, et al., 2018). De keersmaecker and Roets, (2019) find that those higher on the authoritarian scale are more tolerant of misinformation, while Sinclair, et al. (2020) find that a greater level of RWA increases a person's susceptibility to misinformation. Frischlich, et al. (2021) associate higher levels of RWA with a stronger propensity to fall for distorted news that includes prejudicial and

opinionated content. It is clear from this research that RWA would be a strong indicator of a person's likelihood of falling for and thus spreading misinformation.

III. Dehumanization, infrahumanization and the link to misinformation studies

One observed result of those who score high on authoritarianism scales is the dehumanization of others (Kteily, et al, 2015) (Haslam and Stratemeyer, 2016) (Costa Silva, et al., 2019). Dehumanization, the denial of humanness in others, is seen as "a motivated phenomenon," allowing one to release aggression, to ignore ethical and moral feelings, or alleviate distress about one's negative actions against others (Haslam, 2006). Blatant dehumanization is used when discussing more harmful behavior, including racism, classism, oppression and genocide (Kteily, et al., 2015) (N.A. and Manjaly, 2020). Blatantly dehumanized groups studied include those with obesity (Lv, et al., 2024), immigrants (Markowitz and Slovic, 2021), the physically disabled (Sitruk, et al., 2023), the mentally ill (Boysen, et al., 2023), and those who are autistic (Kim, et al., 2024). Ultimately, the motivation to dehumanize may need to be viewed as a fundamental trait in the behavior of information users when encountering misinformation.

In contrast, infrahumanization is applied in research to study everyday life situations that bring out negative attitudes about others (Haslam and Lougnan, 2014). An emphasis on secondary emotions, (e.g. shame, guilt, nostalgia, pride, compassion, melancholia, resignation, and remorse), rather than primary emotions (e.g. anger, pleasure, happiness, courage, surprise, fear, and irritation) distinguishes the study of infrahumanization from the more extreme dehumanization. Cortes, et al. (2005) further distinguish infrahumanism as a method by which concepts of 'intelligence,' 'language,' and 'refined emotions' are heightened for ingroup members over outgroup members. Infrahumanization predicts that members of in-groups will claim more 'humanity' for themselves than for those in out-groups, characterizing such 'secondary' emotions as their own group's uniquely human emotions (Leyens, et al, 2001) (Rodríguez-Pérez and Betancor, 2023). Castano and Giner-Sorolla (2006) find that "people are ready to deny humanity in others to maintain their own psychological equanimity," arguing that the willingness to fabricate or believe fabrications about outgroups is a fundamental psychological mechanism used to maintain mental balance. Importantly, infrahumanization is more likely to occur when a *negative representation* is associated with an outgroup. Such negative representations may be spread through social media misinformation campaigns and may be an important factor in how misinformation about members of targeted outgroups proliferates among ingroup members.

Examining dehumanization and infrahumanization as motives in spreading misinformation

Early use of survey and evaluative tools for infrahumanism levels starts with Leyens, et al. (2001), who develop a method of examining primary and secondary emotions and demonstrate how it can be differentiated within subjects' views of outgroup and ingroup characteristics. Primary emotions were found among both humans as well as other species (e.g. anger, fear) and are thus seen as universal; secondary emotions, however, are perceived by

subjects as more complex and more likely to appear in members of an in-group and less so in the outgroup (Martin, et al., 2008). Such findings are backed up in subsequent research, including Vaes, et al. (2003) and Cortes, et al., (2005). Castano and Giner-Sorolla, (2006) in several experiments completed tasks that judged their levels of infrahumanizing pre-determined outgroups (e.g., aboriginals) and the self-perceived feelings of guilt associated with them. More recently, Ritov and Bruck (2024) examine infra- and dehumanization among Israelis and Palestinians through mistaken information, conspiracies, and biased opinions about each. Using Leyens' (2001) dehumanization scale to determine the levels of dehumanization and infrahumanization of Israeli Jews to Palestinian Arabs and vice-versa, they examine the meta-perceptions of members of ingroups and their understandings of those in outgroups. They do not, however, focus on the role that misinformation may play in developing or interacting with dehumanizing attitudes. As a result, their approach might be modified with an emphasis on such false information, providing a novel method in the study of misinformation.

Furthering the field of dehumanization studies and moving beyond Leyens' scale, Lantos and Harris (2021) propose a *Humanity Inventory* to detect individual differences in the propensity of certain persons to dehumanize others, finding a "stable individual difference [that] may underlie dehumanization propensity" (ibid). This approach allows for researchers to pose questions regarding individuals' motives behind why they dehumanize others, significantly opening up the approach to the study of misinformation and fake news in the overlap with other individual personal characteristics.

Measuring and modeling dehumanization and its link to misinformation spread

Dehumanization effects have been observed in politics with the dehumanization of members of opposing political parties seen as a prime widespread example (Martherus, et al., 2021) (Casesse, 2020). It has also been studied with regard to gender perceptions within romantic relationships (Pizzirani, et al, 2019) and noted in class stereotypes by Gorski (2012), Loughnan, et al. (2014), and Durante and Fiske (2017). Such class attitudes and stereotypes impact how people attribute non-human motives and descriptions to those in lower classes than themselves, particularly those who are seen as non-citizens, foreigners, migrants, or immigrants. Importantly, Moore-Berg et al. (2022) find that empathy for migrants can increase through media interventions. Min (2024) covers similar ground with an exploration of the relationship between information users' exposure to political disinformation on social media in the U.S. and South Korea and the representation of marginalized groups.

Overall, however, little has been studied regarding the dehumanization effects of information users in terms of misinformation. Over's (2021) critique of dehumanization theory finds room for both dehumanization and stereotyping in propaganda and disinformation, with a focus on verbal and written communication of dehumanizing metaphors. Moore-Berg, et al. (2022) provide a bridge between the study of dehumanization and the influence of misinformation, with their focus on how attitudes about migrant workers can be influenced by the tendency to dehumanize and the willingness to accept misinformation about such groups of

people. Min's (2024) examination of dominant groups' exposure to political disinformation and resulting negative attitudes about marginalized groups suggests another area to explore in more detail. Osborne et al.'s (2022) finding that those higher on the authoritarian scale tend to score lower in cognitive engagement and the tendency to uncritically take information at face value speaks directly to issues of handling misinformation and fake news, especially regarding outgroups that are disliked, feared, or hated.

A new model (Figure 1) hypothesizes the links between the authoritarian personality, dehumanizing and infrahumanizing behaviors, and the belief and spread of misinformation. Authoritarian tendencies in those scoring higher in either the LWA or RWA indices (1) are demonstrated through subjects' belief of ingroup threats and perceived danger by disruptions to social order or traditions (2); this in turn influences the threatening perceptions about those in an outgroup (3). The attitudes held against outgroup members are reflected in the degree to which one overtly expresses their dehumanization and infrahumanization of others. Incorporating Lantos and Harris' (2021) Humanity Inventory scale to capture the level of dehumanizing others via the attitudes of subjects regarding out-group attitudes would be a useful indicator of an information user's propensity to believe and spread misinformation related to those in an outgroup (4). The predicted result is that a person scoring higher on the dehumanizing scale would be more likely to believe and then spread misinformation about a targeted outgroup; those lower on the scale of infrahumanizing others would conversely be more likely to verify and disbelieve such misinformation (5). Taken altogether this model may help in gathering quantitative evidence in misinformation behavior.

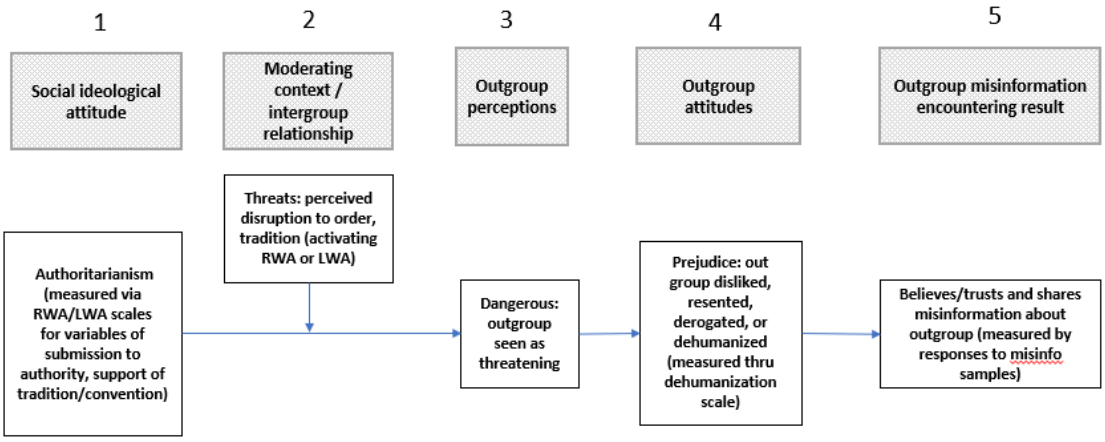

Figure 1. Model of process of dehumanization and belief in or disbelief in misinformation about targeted out-groups.

As an important addendum, outside the scope of this paper, it is important to note that self-dehumanization may also play a role in the spread and belief in misinformation (Weiss, et

al., 2025). Dehumanization of others, it is found, increases the likelihood of dehumanizing one's self (Bastian, et al. 2013) (Bastian and Haslam, 2010). Elfreda Chatman's work on alienation and self-estrangement in janitors (1990) provides a further link to information behavior studies. This link may provide a promising direction in how misinformation continues to spread and be believed despite personal exposure to interventions attempting to mitigate it.

IV. Conclusion and future research

Dehumanization and infrahumanization appear to play important roles in how information users interact with information and may explain why some do not fact check or seek alternative sources to verify what may be misinformation. While there has been a little research into the effects of blatant dehumanization on the spread of misinformation, none appear to focus on the subtler form of infrahumanization, suggesting an important gap within the literature. This would be a novel approach to the study of misinformation and would yield important advances in the LIS and HIB fields, especially in light of how denying secondary human emotions in outgroups may perpetuate misinformation about those groups. The advantage of focusing on dehumanization as a motive in the belief of misinformation, rather than relying on RWA or LWA specifically, is that dehumanization highlights a fundamental characteristic shared between those showing authoritarian tendencies regardless of stated political affiliations. This would make it an important trait to examine for all types of political extremism, not merely among right- or left-wing mindsets specifically. The focus on dehumanization may also reduce implicit bias on the side of researcher who may be sympathetic to specific right- or left-wing political issues being used in experimentation. There appears to be a need, then, to find out whether dehumanization of others and oneself has a relationship to the information behaviors exhibited when encountering, reading, consuming, and spreading misinformation.

References

Allard, A. and Clavien, C. (2024) Teaching epistemic integrity to promote reliable scientific communication. Frontiers in Psychology. 15:1308304. doi: 10.3389/fpsyg.2024.1308304

Allcott, H., & Gentzkow, M. (2017). Social media and fake news in the 2016 election. *Journal of Economic Perspectives*, 31(2), 211–236. doi:10.1257/jep.31.2.211

Alt, D. (2015). College students' academic motivation, media engagement and fear of missing out. *Computers in Human Behavior*, 49, 111–119, doi:10.1016/j.chb.2015.02.057.

Altemeyer, B. (1998). The other "authoritarian personality." *Advances in Experimental Social Psychology*, 30, 47-92.

Bastian B. and Haslam, N. (2010). Excluded from humanity: The dehumanizing effects of social ostracism. Journal of Experimental Social Psychology, 46, 107–113. https://doi.org/10.1016/j.jesp.2009.06.022

Bastian, B., Jetten, J., Chen, H., Radke, H. R. M., Harding, J. F., & Fasoli, F. (2013). Losing Our Humanity: The Self-Dehumanizing Consequences of Social Ostracism. Personality and Social Psychology Bulletin, 39(2), 156-169. https://doi.org/10.1177/0146167212471205

Berggren, M., Akrami, N., Bergh, R. & Ekehammar, B. (2019). Motivated social cognition and authoritarianism: is it all about closed-mindedness? *J. Individ. Differ.* 40, 204–212.

Beierlein C., Asbrock F., Kauff M., Schmidt P. (2014). Die Kurzskala Autoritarismus (KSA-3): Ein ökonomisches Messinstrument zur Erfassung dreier Subdimensionen autoritärer Einstellungen [The Short Scale for Authoritarianism (KSA-3): An Efficient Instrument to Measure Three Subdimensions of Authoritarian Attitudes]. Mannheim: GESIS – Leibniz Institut für Sozialwissenschaften.

Boysen, G. A., Chicosky, R. L., & Delmore, E. E. (2023). Dehumanization of Mental Illness and the Stereotype Content Model. *Stigma and Health (Washington, D.C.)*, *8*(2), 150–158. https://doi.org/10.1037/sah0000256

Bronstein, M. V., Pennycook, G., Bear, A., Rand, D. G., & Cannon, T. D. (2019). Belief in Fake News is Associated with Delusionality, Dogmatism, Religious Fundamentalism, and Reduced Analytic Thinking. Journal of Applied Research in Memory and Cognition, 8(1), 108–117. https://doi.org/10.1016/j.jarmac.2018.09.005

Cassese, E. C. (2020). Dehumanization of the Opposition in Political Campaigns. Social Science Quarterly, 101(1), 107–120. https://doi.org/10.1111/ssqu.12745

Castano, E., & Giner-Sorolla, R. (2006). Not Quite Human: Infrahumanization in Response to Collective Responsibility for Intergroup Killing. Journal of Personality and Social Psychology, 90(5), 804–818. https://doi.org/10.1037/0022-3514.90.5.804

Chatman, E. A. (1990). Alienation Theory: Application of a Conceptual Framework to a Study of Information among Janitors. *RQ*, 29(3), 355–368.

Choma, B. L., Briazu, R. A., Asrani, V., Cojocariu, A., & Hanoch, Y. (2024). The politics of red meat consumption and climate change. Environmental Research Communications, 6(1). https://doi.org/10.1088/2515-7620/ad1c06

Chowdhury, N., Khalid, A., & Turin, T. C. (2021). Understanding misinformation infodemic during public health emergencies due to large-scale disease outbreaks: A rapid review. Journal of Public Health, 1–21. https://doi.org/10.1007/s10389-021-01565-3

Cortes, B. P., Demoulin, S., Rodriguez, R. T., Rodriguez, A. P., & Leyens, J.-P. (2005). Infrahumanization or Familiarity? Attribution of Uniquely Human Emotions to the Self, the Ingroup, and the Outgroup. Personality & Social Psychology Bulletin, 31(2), 243–253. https://doi.org/10.1177/0146167204271421

Da Costa Silva, K., Álvaro, J. L., Torres, A. R. R., & Garrido, A. (2019). Terrorist threat, dehumanization, and right-wing authoritarianism as predictors of discrimination. Scandinavian Journal of Psychology, 60(6), 616–627. https://doi.org/10.1111/sjop.12574

Costello, T. H. et al. (2022) Clarifying the structure and nature of left-wing authoritarianism. J. Personal. Soc. Psychol. 122, 135–170.

Costello, T.H. and Patrick, C.J. (2023). Development and Initial Validation of Two Brief Measures of Left-Wing Authoritarianism: A Machine Learning Approach. Journal of personality assessment, 105(2), 187–202. https://doi.org/10.1080/00223891.2022.2081809

Cramer, E.M.; Song, H.; Drent, A.M. (2016). Social comparison on Facebook: Motivation, affective consequences, self-esteem, and Facebook fatigue. *Computers in Human Behavior*, 64, pp. 739–746, doi:10.1016/j.chb.2016.07.049.

Cross, J. R., et al. (2010). Maximizing student potential versus building community: An exploration of right-wing authoritarianism, social dominance orientation, and preferred practice among supporters of gifted education. Roeper Review, 32, 235-248.

Cuevas, J. A., Dawson, B. L., & Grant, A. C. (2022). An analysis of the relationships between religious orientation, authoritarianism, cross-cultural interactions, and political views. Analyses of Social Issues and Public Policy : ASAP., 22(1), 408–426. https://doi.org/10.1111/asap.12303

De keersmaecker, J. & Roets, A. Is there an ideological asymmetry in the moral approval of spreading misinformation by politicians? *Personality and Individual Differences*, 143, 165–169 (2019).

Dervin, B. (1996). Chaos, order and sense-making: a proposed theory for information design. In R. Jacobson (ed.), *Information Design*. Cambridge, MA: MIT press.

Durante, F., & Fiske, S. T. (2017). How social-class stereotypes maintain inequality. Current Opinion in Psychology, 18, 43–48. https://doi.org/10.1016/j.copsyc.2017.07.033

Dutton, W. H., & Fernandez, L. (2019). How susceptible are Internet users? *Intermedia*, 46(4), 36–40. doi:10.2139/ssrn.3316768

Dyrendal, A., Kennair, L. E. O., & Bendixen, M. (2021). Predictors of belief in conspiracy theory: The role of individual differences in schizotypal traits, paranormal beliefs, social dominance orientation, right wing authoritarianism and conspiracy mentality. Personality and Individual Differences, 173, 110645-. https://doi.org/10.1016/j.paid.2021.110645

Eppler, M. and Mengis, J. (2004). The concept of information overload: A review of literature from organization science, accounting, marketing, MIS, and related disciplines. *The Information Society*, 20, pp. 325–344.

Facciani, M. and Steenbuch-Traberg, S. (2024) Personal Network Composition and Cognitive Reflection Predict Susceptibility to Different Types of Misinformation. Sciendo. https://intapi.sciendo.com/pdf/10.21307/connections-2019.044

Fister, B. (2021). The librarian war against QAnon. *The Atlantic*. Available online: https://www.theatlantic.com/education/archive/2021/02/how-librarians-can-fight-qanon/618047/ (accessed on 20 June 2021).

Frischlich, L., Hellmann, J. H., Brinkschulte, F., Becker, M., & Back, M. D. (2021). Right-wing authoritarianism, conspiracy mentality, and susceptibility to distorted alternative news. Social Influence, 16(1), 24–64. https://doi.org/10.1080/15534510.2021.1966499

George, J. and Aasi, P., (2024). WWC: Leveraging Extreme Events in Teaching. *Information Systems Education Journal*, 22(4) pp 73-83. https://doi.org/10.62273/PXXN4147

Gorski PC. (2012) Perceiving the problem of poverty and schooling: Deconstructing the class stereotype that mis-shape education practice and policy. Equity Excell Educ, 45, 302–319.
Harsin, J. (2015). Regimes of Posttruth, Postpolitics, and Attention Economies. Communication, Culture & Critique, 8(2), 327–333. https://doi.org/10.1111/cccr.12097
Haslam, N. (2006). Dehumanization: An Integrative Review. Personality and Social Psychology Review, 10(3), 252–264. https://doi.org/10.1207/s15327957pspr1003_4
Haslam, N., and Loughnan, S. (2014). Dehumanization and Infrahumanization. Annual Review of Psychology, 65(1), 399–423. https://doi.org/10.1146/annurev-psych-010213-115045
Haslam, N., and Stratemeyer, M. (2016). Recent research on dehumanization. Current Opinion in Psychology, 11, 25–29. https://doi.org/10.1016/j.copsyc.2016.03.009
Kerr, J.R. and Wilson, M.S. (2021). Right-wing authoritarianism and social dominance orientation predict rejection of science and scientists. Group Process. Intergroup Relat. 24, 550–567.
Kim, S. and Kim, S. (2020). The Crisis of Public Health and Infodemic: Analyzing Belief Structure of Fake News about COVID-19 Pandemic. Sustainability 2020, 12, 9904.
Kim, S. Y., Cheon, J. E., & Kim, Y.H. (2024). A Cross-Cultural Examination of Blatant and Subtle Dehumanization of Autistic People. *Journal of Autism and Developmental Disorders*. https://doi.org/10.1007/s10803-023-06217-x
Kteily, N., Bruneau, E., Waytz, A., & Cotterill, S. (2015). The Ascent of Man: Theoretical and Empirical Evidence for Blatant Dehumanization. Journal of Personality and Social Psychology, 109(5), 901–931. https://doi.org/10.1037/pspp0000048
Lantos, D., & Harris, L. T. (2021). The humanity inventory: Developing and validating an individual difference measure of dehumanization propensity. *Journal of Theoretical Social Psychology*, 5, 502–518. https://doi.org/10.1002/jts5.114
Lee, F. (2024). Disinformation Perceptions and Media Trust: The Moderating Roles of Political Trust and Values. International Journal Of Communication, 18, 23. Retrieved from https://ijoc.org/index.php/ijoc/article/view/21052
Leyens, J., Rodriguez-Perez, A., Rodriguez-Torres, R., Gaunt, R., Paladino, M., Vaes, J.,& Demoulin, S. (2001). Psychological essentialism and the differential attribution of uniquely human emotions to ingroups and outgroups. European Journal of Social Psychology, 31, 395–411. https://doi.org/10.1002/ejsp.50
Liu, G. 2021. Moving up the Ladder of Source Assessment Expanding the Craap Test with Critical Thinking and Metacognition. *College & Research Libraries News*, vol. 82, no. 2, pp. 75–79, https://doi.org/10.5860/crln.82.2.75.
Loughnan, S., Haslam, N., Sutton, R. M., & Spencer, B. (2014). Dehumanization and Social Class: Animality in the Stereotypes of "White Trash," "Chavs," and "Bogans." Social Psychology (Göttingen, Germany), 45(1), 54–61. https://doi.org/10.1027/1864-9335/a000159
Lv, Y., Tang, Q., Wang, S., Tao, Y., Zhang, C., & Liu, X. (2024). Awe weakens the blatant dehumanization of people with obesity via common ingroup identity. *Current Psychology (New Brunswick, N.J.)*, *43*(17), 15328–15341. https://doi.org/10.1007/s12144-023-05509-w
Markowitz, D. M., & Slovic, P. (2020). Social, psychological, and demographic characteristics of dehumanization toward immigrants. Proceedings of the National Academy of Sciences - PNAS, 117(17), 9260–9269. https://doi.org/10.1073/pnas.1921790117

Markowitz, D. M., & Slovic, P. (2021). Why we dehumanize illegal immigrants: A US mixed-methods study. *PloS One*, *16*(10), e0257912–e0257912. https://doi.org/10.1371/journal.pone.0257912

Martel, C., Pennycook, G., & Rand, D. G. (2020). Reliance on emotion promotes belief in fake news. Cognitive research: principles and implications, 5, 1-20. Retrieved from https://link.springer.com/article/10.1186/s41235-020-00252-3

Martherus, J. L., Martinez, A. G., Piff, P. K., & Theodoridis, A. G. (2021). Party Animals? Extreme Partisan Polarization and Dehumanization. Political Behavior, 43(2), 517–540. https://doi.org/10.1007/s11109-019-09559-4

Martin, J., Bennett, M., & Murray, W. S. (2008). A developmental study of the infrahumanization hypothesis. *British Journal of Developmental Psychology*, *26*(2), 153–162. https://doi.org/10.1348/026151007X216261

Min, B. 2024. *When Disinformation Endangers Refugees: A Cross-national Study of the Effects of Refugee Fake News on U.S. and South Korean Audiences*. [Dissertation]

Montesi, M. (2021). Understanding fake news during the Covid-19 health crisis from the perspective of information behaviour: The case of Spain. Journal of Librarianship and Information Science, 53(3), 454–465. https://doi.org/10.1177/0961000620949653

Montesi, M., & Álvarez Bornstein, B. (2017). Defining a theoretical framework for information seeking and parenting. *The Journal of Documentation*., 73(2), 186–209. https://doi.org/10.1108/JD-04-2016-0047

Moore-Berg, S. L., Hameiri, B., & Bruneau, E. G. (2022). Empathy, Dehumanization, and Misperceptions: A Media Intervention Humanizes Migrants and Increases Empathy for Their Plight but Only if Misinformation About Migrants Is Also Corrected. Social Psychological & Personality Science, 13(2), 645–655. https://doi.org/10.1177/19485506211012793

Moser, K. (2024). Climate Change Denial: An Ecocidal, Parallel Universe of Simulation. In: Fake News in Contemporary Science and Politics. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-56180-1_2

N. A., B. Z., and Manjaly, J. A. (2020). Dehumanization of Scheduled Castes and Scheduled Tribes (SC/ST): Evidence from Implicit, Moderate, and Blatant Measures. Analyses of Social Issues and Public Policy, 20(1), 563–583. https://doi.org/10.1111/asap.12214

Nan, X., Wang, Y., & Thier, K. (2022). Why do people believe health misinformation and who is at risk? A systematic review of individual differences in susceptibility to health misinformation. Social Science & Medicine, 314, 115398. https://doi.org/10.1016/j.socscimed.2022.115398

Ogasawara, M. 2019. The Daily Us (vs. Them) from Online to Offline: Japan's Media Manipulation and Cultural Transcoding of Collective Memories. *Journal of Contemporary Eastern Asia*, 18, pp. 49–67.

Osatuyi, B. and Dennis, A.R. (2024) The strength of weak ties and fake news believability, Decision Support Systems, https://doi.org/10.1016/j.dss.2024.114275. (https://www.sciencedirect.com/science/article/pii/S0167923624001088)

Osborne, D., Costello, T.H., Duckitt, J. et al. (2023) The psychological causes and societal consequences of authoritarianism. Nature Reviews Psychology 2, 220–232. https://doi.org/10.1038/s44159-023-00161-4

Ospina, J., Orosz, G., & Spencer, S. (2023). The relation between authoritarian leadership and belief in fake news. Scientific Reports, 13(1), 12860–12860. https://doi.org/10.1038/s41598-023-39807-x

Over, H. (2021). Seven Challenges for the Dehumanization Hypothesis. *Perspectives on Psychological Science*, *16*(1), 3-13. https://doi.org/10.1177/1745691620902133

Pennycook, G., Cheyne, J. A., Koehler, D. J., & Fugelsang, J. A. (2016). Is the cognitive reflection test a measure of both reflection and intuition? Behavior Research Methods, 48(1), 341–348. https://doi.org/10.3758/s13428-015-0576-1

Pennycook, G., and Rand, D.G. (2020). Who falls for fake news? The roles of bullshit receptivity, overclaiming, familiarity, and analytic thinking. Journal of Personality, 88(2), 185–200. https://doi.org/10.1111/jopy.12476

Pennycook G., Ross, R.M., Koehler, D.J., and Fugelsang, J.A. (2017). Dunning–Kruger effects in reasoning: Theoretical implications of the failure to recognize incompetence. Psychonomic Bulletin & Review, 24, 1774-1784.

Pizzirani, B., Karantzas, G. C., & Mullins, E. R. (2019). The Development and Validation of a Dehumanization Measure Within Romantic Relationships. Frontiers in Psychology, 10, 2754–2754. https://doi.org/10.3389/fpsyg.2019.02754

Rapanta, C. (2024). Post-Truth Argumentation. In: Jandrić, P. (eds) *Encyclopedia of Postdigital Science and Education*. Springer, Cham. https://doi.org/10.1007/978-3-031-35469-4_55-1

Richey, S. A birther and a truther: the influence of the authoritarian personality on conspiracy beliefs. *Politics and Policy, 45*, 465–485 (2017).

Ritov, I. and Bruck, A. (2024). False beliefs about an antagonistic group. 26th Sydney Symposium of Social Psychology. http://www.sydneysymposium.unsw.edu.au/2024/chapters/RitovSSSP2024.pdf

Rodríguez-Pérez, A., & Betancor, V. (2023). Infrahumanization: a restrospective on 20 years of empirical research. *Current Opinion in Behavioral Sciences*, 50, 101258-. https://doi.org/10.1016/j.cobeha.2023.101258

Sadiq, M. T., & Saji, M. K. (2022). The disaster of misinformation: A review of research in social media. *International Journal of Data Science and Analytics*, 13(4), 271–285. https://doi.org/10.1007/s41060-022-00311-6

Savolainen, R. (2017) Information Need as Trigger and Driver of Information Seeking: a Conceptual Analysis. *Aslib Journal of Information Management*, vol. 69, no. 1, pp. 2–21, https://doi.org/10.1108/AJIM-08-2016-0139.

Schoorman, F.D.; Roger C.; Mayer, R.C.; Davis, J.H. (2007). An Integrative Model of Organizational Trust: Past, Present, and Future. *The Academy of Management Review*, 32, pp. 344-354.

Sinclair, A. H., Stanley, M. L. & Seli, P. (2020). Closed-minded cognition: right-wing authoritarianism is negatively related to belief updating following prediction error. *Psychon. Bull. Rev.* **27**, 1348–1361.

Sitruk, J., Summers, K. M., & Lloyd, E. P. (2023). Dehumanizing disability: Evidence for subtle and blatant dehumanization of people with physical disabilities. *Current Research in Ecological and Social Psychology*, *5*, 100162-. https://doi.org/10.1016/j.cresp.2023.100162

Stanley, S. K., Wilson, M. S. & Milfont, T. L. (2017) Exploring short-term longitudinal effects of right-wing authoritarianism and social dominance orientation on environmentalism. Personal. Individ. Differ. 108, 174–177.

Talwar, S.; Dhir, A.; Kaur, P.; Zafar, N.; Alrasheedy, M. (2019). Why do people share fake news? Associations between the dark side of social media use and fake news sharing behavior. *Journal of Retailing and Consumer Services*, 51, 72–82.

Vaes, J., Paladino, M. P., Castelli, L., Leyens, J.-P., & Giovanazzi, A. (2003). On the Behavioral Consequences of Infrahumanization: The Implicit Role of Uniquely Human Emotions in Intergroup Relations. Journal of Personality and Social Psychology, 85(6), 1016–1034. https://doi.org/10.1037/0022-3514.85.6.1016

Valenzuela, S., Halpern, D., Katz, J.E. and Miranda, J.P. (2019), The paradox of participation versus misinformation: social media, political engagement, and the spread of misinformation, *Digital Journalism*, Vol. 7 No. 6, pp. 802-823.

Van Hiel, A., Pandelaere, M. & Duriez, B. (2004). The impact of need for closure on conservative beliefs and racism: differential mediation by authoritarian submission and authoritarian dominance. *Personal. Soc. Psychol. Bull.* **30**, 824–837.

van Prooijen, J. (2017). Why education predicts decreased belief in conspiracy theories. Applied Cognitive Psychology, 31(1), 50–58. doi:10.1002/acp.3301

Walton, G., Pointon, M., Barker, J., Turner, M., & Wilkinson, A. J. (2022). Information discernment and the psychophysiological effects of misinformation. Global Knowledge, Memory and Communication, 71(8/9), 873–898. https://doi.org/10.1108/GKMC-03-2021-0052

Wardle, C., & Derakhshan, H. (2017). Information disorder: Toward an interdisciplinary framework for research and policymaking. Council of Europe Report.

Weiss, A.P.; Alwan, A.; Garcia, E.P.; Kirakosian, A.T. (2021). Toward a Comprehensive Model of Fake News: A New Approach to Examine the Creation and Sharing of False Information. *Societies*, 11(3). https://doi.org/10.3390/soc11030082

Weiss, A., Ghosh, S., and Johnson, F. (2025). Exploring Self-dehumanization as a Factor in Misinformation Belief and Spread. In *Proceedings of the 2025 ACM SIGIR Conference on Human Information Interaction and Retrieval* (*CHIIR '25*). Association for Computing Machinery, New York, NY, USA, 326–332. https://doi.org/10.1145/3698204.3716467

Wenger, E. (2000). Communities of practice: Learning as a social system. *Organization, 7*(2), 225–246.

Wilson, T.D. (2000). Human Information Behavior. *Informing Science*, 3(2). http://inform.nu/Articles/Vol3/v3n2p49-56.pdf

Zakrisson, I. (2005). Construction of a short version of the Right-Wing Authoritarianism (RWA) scale. Personality and Individual Differences, 39(5), 863–872. https://doi.org/10.1016/j.paid.2005.02.026

Zmigrod, L., Rentfrow, P. J. & Robbins, T. W. (2018). Cognitive underpinnings of nationalistic ideology in the context of Brexit. *Proc. Natl Acad. Sci. USA* 115, E4532–E4540.