# Deception as a Bridging Concept in the Study of Disinformation, Misinformation, and Misperceptions: Toward a Holistic Framework

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#### Abstract

We propose deception as a bridging concept that will enhance the study of misinformation, disinformation, and misperceptions. As we set it out here, the concept integrates insights from multiple social science disciplines and uniquely connects actors' intentions, information, and attitudinal or behavioral outcomes. A focus on deception will enrich research that describes the existence of false and misleading information but stops short of identifying their influence. Equally, through its focus on how actors' deceptive strategies are important in attempts to exercise power, it can augment the study of the cognitive and attitudinal biases that render people susceptible to misperceptions. We identify the main themes in the study of deception: mediasystemic distortions in information supply; the relational interactions that both produce and activate cognitive biases; and the attributes, strategies, and techniques of deceptive entities. We conclude with a summary typology of ten principal variables and their 57 focal indicators.

Keywords: deception, misperceptions, misinformation, disinformation, media, power

# Deception as a Bridging Concept in the Study of Disinformation, Misinformation, and Misperceptions: Toward a Holistic Framework

Power exercised through media will always vary in its sources and its outcomes. But explaining how such power can shape the beliefs and behavior of citizens is essential to all accounts of how meaning becomes consequential in the world. Fundamentally, as the philosopher Don Fallis has written, this is because we citizens "cannot acquire, all by ourselves, all of the knowledge that we need to live our lives. We often have to rely on information that we receive from others" (2011, p. 21). Human history suggests that attempts to deceive may thrive in this basic context of interdependence. How, when, and why do such attempts succeed?

We define deception as when an identifiable actor's prior intention to mislead results in attitudinal or behavioral outcomes that correspond with the prior intention. As Buller and Burgoon once wrote in this journal, the concept of deception directs focus to whether intentions to mislead are actually accomplished (1996, p. 205). Our research for this article revealed that, over the last thirty years, and across a range of social science disciplines, deception studies have developed some common—and surprisingly refreshing—terminology. Most accounts maintain that deception is intentional, communicative action and explicitly use the terms "intentionally," "knowingly," or "deliberately." This multidisciplinary social science literature also suggests that deception is outcome oriented. It is to "foster," "cause," "create," "spread" or "engender" "false" or "untrue" "belief" or "understanding" by the receiver of a "message" or "information." Once theorized, these processes can be examined empirically and the extent to which goals are achieved can be assessed (e.g., Buller & Burgoon, 1996; Ganis & Keenan, 2009; Levine, 2014; Rubin, 2017; Whaley, 1982).

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Yet deception conceptualized in this way has played only a minor role in the recent wave of research on misinformation, disinformation, and misperceptions. In this article, we argue that a multidisciplinary, social scientific understanding of deception can add distinctive value to this burgeoning field. Conceptually, deception brings into focus the agency and strategies of those who seek to deceive. It can spur empirical sensitivity to whether deceptive strategies do or do not succeed in deceiving individuals and groups. It can also enrich research that has described the existence of false and misleading information in mediated settings (for example the research on online computational propaganda) but has mostly stopped short of identifying whether these phenomena shape people's attitudes and behavior. Equally, it can augment research that explores cognitive and attitudinal biases that render individuals more susceptible to misperceptions. It can do so because it spotlights how specific entities—people, organizations, and communication technologies—may activate such biases in the first place by reconfiguring the relational contexts of communication.

In mapping out our perspective we adhere to the distinction between misinformation and disinformation that became important in the field after 2016 (Jack, 2017; Wardle, 2017). Misinformation is unintentional and may or may not inadvertently mislead; disinformation is intentional and may or may not purposively mislead (e.g., Chadwick et al., 2018, p. 4257; Egelhofer & Lecheler, 2019, p. 102; Hameleers et al., 2021, p. 3). Yet our article casts this distinction in a new light. We do *not* argue that disinformation has been insufficiently studied. We argue that *deception* has been insufficiently conceptualized. Disinformation and deception are related but conceptually distinct. Identifying an intention to deceive is an important part of studying deception but it is not exhaustive. On its own, an intention to deceive is not deception. On its own, false information is not deception. The concept of deception enables scholars to

build an explanatory bridge linking intentionality, processes, and outcomes. Deception occurs when an intention to deceive can be shown empirically to lead to the adoption of false beliefs, following relational interactions between deceivers and deceived in specific contexts. Our framework in this article seeks to outline the variables and indicators that matter most in these intentions, interactions, contexts, and outcomes while also paying attention to the characteristics of today's media systems and without resorting to simplistic, instrumental models of propaganda.<sup>1</sup>

We also want to suggest that a further conceptual advantage of deception is that it can help research be more precise about the distinction between misinformation and disinformation. The concept of deception can sensitize research (Blumer, 1954) to the possibility that what appears to be misinformation may actually have origins in actors' attempts to deceive. In this sense, the concept moves beyond misperceptions' mere existence "out there" and adds an important layer of additional consideration. It asks: can misperceptions be traced empirically to identifiable points of origin in actors' strategic attempts to exercise power?

Our aims are conceptual, translational, and integrative. Our method is to incorporate insights from social scientific studies of deception across multiple disciplines, to move toward a more holistic conceptual framework (Ravitch & Riggan, 2017). In the way we set it out, deception can be an important bridging concept, in two senses. First, conceptually, deception provides an integrative bridge between a focus on intentions, a focus on information, and a focus on behavioral and attitudinal outcomes. Second, in common with other bridging concepts, it can transpose insights from other disciplines and fields into communication research. Bridging concepts have the potential to change ways of thinking about hard problems (Davids, 2015, p.

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838). They enable common endeavor within and between disciplines and fields, bolster interdisciplinary dialogue, and obviate the need to constantly "reinvent the wheel" conceptually. Examples of recent bridging concepts in the social sciences include "resilience" and "sustainability" (Davids, 2015; De Jong & Dannecker, 2018). As we show in what follows, a body of empirical research across the social sciences has theorized deception and empirically tested its variegated forms. We discuss critically a selection of these accounts, from the fields of communication, political science, psychology, economics, business studies, and information science. What do these have to say about how and why deception occurs? What should communication researchers now be looking for and how can these insights add to the growing field? Some selectivity is necessary, so throughout we use insights from studies that have demonstrated attitudinal and behavioral outcomes.

# Legacies of Research: Deception's Curious Lack of Prominence

We believe deception's minor role in the recent wave of research derives from two legacies of research. The first legacy is the debate about "minimal effects," the "active audience," and elite-centered, "instrumental" models of propaganda. Social influence was a major theme of communication research from its germinal phase in the 1920s (e.g. Lasswell, 1927). But the minimal effects paradigm gradually became dominant, especially in political communication (e.g. Bartels, 1993; Berelson et al., 1954). As Anderson (2021) has shown, this was never a neat and linear progression and considerable overlaps between propaganda and minimal effects research agendas continued for several decades. That said, work on propaganda, important throughout the Cold War, focused on elite attempts to deceive but the reception of meaning tended to remain opaque or merely inferred from message content (e.g. Ellul, 1962; Herman & Chomsky, 1988). This lack remains in propaganda studies, which have rich accounts

of messengers and messages but less to say, in explanatory terms, about the conditions under which these may or may not shape attitudes and behavior (e.g. Baines, P. et al., 2019; Bakir, 2020; Marwick & Lewis, 2017). In addition, as Freelon and Wells (2020) have argued, recent studies of computational propaganda are yet to fully extend their frameworks for understanding impact at the attitudinal and behavioral levels (though see Cook et al., 2017; Everett et al., 2016). As Weeks and Gil de Zúñiga recently observed, since 2016 a key neglected question is when false and misleading information matters: "who is exposed to it, where, and to what effect?" (2021, p. 279). Studies that demonstrate how, why, and to what extent deception works in online settings—the most crucial concern today—are still difficult to find.

The second research legacy derives from research on political misperceptions, where the latter are defined as "cases in which people's beliefs about factual matters are not supported by clear evidence and expert opinion" (Nyhan & Reifler, 2010, p. 305). This approach has mostly encouraged a focus on the cognitive biases and limitations of publics. In stark contrast with the propaganda studies tradition, research on political misperceptions has mostly emphasized the individual-level factors that explain why people are susceptible to false and misleading claims. These biases have converged most forcefully in the work on directional partisan motivated reasoning (Kunda, 1990)—the master frame for a large body of research on misperceptions (e.g., Flynn et al., 2017; Hameleers & van der Meer, 2020; Nyhan, 2020)—and now firmly embedded in popular commentary. Its great strength has been an empirical focus on the individual-level characteristics that make it more likely people will adopt beliefs that contradict the best available authoritative knowledge (Flynn et al., 2017).

## **Why Deception Matters**

While useful, we believe the focus on misperceptions has led to a neglect of three important factors, each of which can be addressed by the integration of deception as a concept that bridges intentions, information, interactions, and outcomes. First, because the study of misperceptions "does not require knowledge of a speaker's intent in making claims" (Nyhan, 2020, p. 221), to date the research has not devoted much attention to the production and supply of information nor the characteristics of deceptive entities more broadly. Research on misperceptions has tended to avoid granular accounts of how elites and organizations seek to activate prejudices and anxieties to mobilize opinion and gain power. Experimental research in the misperceptions framework that has tested whether people believe false information has not focused much on the links between actors' deceptive intentions and attitudinal or behavioral outcomes (e.g., Clayton et al., 2020).

Second, the cognitive biases that matter for the spread and adoption of false and distorted beliefs are the product of socially situated interactions in communicative and cultural contexts over time. Cognitive biases are socially constructed forces that derive from past social experience. As we show below, a focus on deception can unveil how manipulation of these interactive and communicative contexts can establish, or increase the intensity and salience of, cognitive biases over time.

Third, with a few exceptions, empirical research on misperceptions has not integrated factors of media and technological design and the affordances they create for attitude formation and social action. In the exceptions (Garrett, 2011; Jang et al., 2019), while there is some discussion of how technological design can surface and propagate information, less attention is paid empirically to whether technologies create affordances for deception and do or do not lead to attitudinal and behavioral change.

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To be clear, we are not suggesting that deception is essential to all social influence or power. Nor are we assuming it is present in all areas of public life or that there is always a direct link between intentions to deceive and individual outcomes. An important part of our framework is that relational interactions both produce and activate cognitive biases that render individuals more susceptible to being deceived, but this is not a simple linear process: there will always be contestation and unintended consequences. We do, however, assume that, depending on the context, most people are susceptible to being deceived at least some of the time. This is because, as studies of interpersonal deception have demonstrated, most people empirically have a "truth default"—they assume honesty in other entities, despite the fact that attempts to deceive are a common part of life (Levine, 2014). This is not to say, however, that all individuals and groups are targeted to the same extent by attempts to deceive (Freelon et al., 2020) and we return to this point later.

We also want to suggest that deception is implicated, at different levels, in the *origins* of misperceptions. A focus on deception can be helpful in tracing misperceptions back to the originating interactions that led to their emergence, before tracing their spread forward again, through the complex, curated flows of today's media systems (Ging et al., 2019; Thorson & Wells, 2016) with their hybrid, online-offline, public-private networks of social media (Chadwick, 2017). In this sense, any focus on deception today must acknowledge that there will be hard limits to reviving elite-centric, instrumental models of propaganda from bygone days (Bennett & Livingston, 2018). Decentralized deception involves more than the mere amplification of information introduced by elites, important though that is. As the spread of conspiracy beliefs such as QAnon illustrates, deception is now a radically decentralized process involving actors that have few prior formal or structural power resources but are nevertheless

able to manipulate communicative contexts, increase their visibility, and reach and influence large audiences. Wanless and Berk's (2020) concept of "participatory propaganda" descriptively captures these aspects of the supply of problematic information, though, again, we stress that the concept of deception can augment such perspectives with an empirical focus on attitudinal and behavioral outcomes. Studying deception does not, therefore, mean reviving old models of propaganda or a view of the individual as a passive dupe. Deception needs to be explained and demonstrated, not merely assumed. But nor does it assume that individuals are always-agentic, motivated meaning-makers who can effectively resist all forms of manipulation.

# **Deception as a Distinctive Concept**

Deception is analytically distinct from lying and from the mere absence of knowledge, though it may align with both of those forces (Carson, 2010; Vrij, 2000). Honest communication need not be entirely true or fully accurate but lacks deceptive intent (Levine, 2014, p. 379). Deceptive intent can involve withholding or concealing, switching topic, using strategic ambiguity, diversions, deflections (Ross & Rivers, 2018), or generating conditional, counterfactual versions of events that make belief in false interpretations more comfortable (Effron, 2018). The key point is that these are observable and it can be demonstrated empirically that they contribute to successful deception (e.g. Clementson, 2018; Effron, 2018). Examples have been documented in the advertising of harmful products (Sangalang et al., 2019), public health crises caused by pollution (Roy, 2017), and, of course, political campaigns. During the 2019 UK general election campaign, Conservative Party leader Boris Johnson repeatedly claimed that the government would build 40 new hospitals by 2030. He omitted the information that funding was only in place for six hospitals (Walker & Campbell, 2020). Deception by obfuscation and strategic ambiguity was a common tactic employed by Republican candidate

Donald Trump during the 2020 US presidential campaign. Commenting on Facebook and Twitter's decisions to suspend his son Donald Trump Jr.'s accounts for sharing a video promoting the false, yet widely believed, information that Hydroxychloroquine is a cure for Covid-19, Trump said "maybe they had a good reason, maybe they didn't, I don't know" (Lerman et al., 2020).

Withholding the truth of a given situation suggests the need to determine empirically that deception has occurred, but also to be relatively open-minded about the mechanisms. This form of deceptive intent violates Grice's (1989, p. 28) influential "quantity" criterion for co-operative communication because it relies on selective omission of significant information. It also rests on the assumption that, in the phraseology of "information manipulation theory," deceptive communication often depends on complex recombinations of true and false information. Baldfaced lies are comparatively rare (McCornack et al., 2014). Interpretive methods, particularly though not exclusively those focusing on when and how elite discourse presents false equivalences will be key here, as Baines and colleagues' analysis of deception in the "policy fiasco" of Brexit demonstrates (D. Baines et al., 2020).

A further insight of the research on deception is that this process of selectivity can be structurally organized, in advance, by those in positions of power. During the Nuremberg, Watergate, Enron, and Trump impeachment trials, the prevalence of "willful ignorance" was revealed. This involved establishing not only who knew what and when, but also whether those in positions of power deliberately avoided exposure to evidence or gave the impression, at the time, that they could not possibly have known the consequences of their actions. In economics, some research has found that people are often unwilling to acquire and share knowledge when it conflicts with their self-interest. This has implications for charitable donations and climate

change, for example—arenas where people have been shown to promote uncertainty to deceive others and bolster their self-interest in pursuing a socially damaging course of action (Grossman & van der Weele, 2017). Such insights can guide research on deception during or after public emergencies, such as in public inquiries into pandemics or pollution crises, especially to identify if willful ignorance emerged when pure expediency outweighed the moral imperative to minimize collective harm.

Some accounts of have shown that deception is distinctive due to its manipulation of temporality (Cialdini, 2001). This matters for the ongoing persistence of false beliefs. If misperceptions are indeed beliefs in factual statements that conflict with currently available evidence (Flynn et al., 2017), we should study how deception plays a role in whether evidence that counters misperceptions actually becomes current and available. In this regard, deception can operate in ways similar to the "second face" or "nondecision" theory of power (Bachrach & Baratz, 1962). This implies a need to study empirically the absence of information which, if it were present, would reduce the likelihood of deceptive manipulation persisting over time.

More broadly, deception is a distinctive concept because its practice can have damaging consequences for civic life. It can undermine an individual's or a group's interests, understandings of facts-in-the-world, and capacity to act with the degree of trust required for effective citizenship (Arendt, 1951). It can distort public opinion and policy preferences and amplify political enmity (D. Baines et al., 2020). Deception can empower those who benefit disproportionately from its outcomes. But it does more than this, for when acts of deception become routine, valuable social norms of evidential verification start to erode. Consider Donald Trump's strategy of contesting the outcome of the 2020 presidential election on the grounds of false claims that voting fraud led to his defeat. The consequences of this kind of action can

include the erosion of trust (Karpf, 2019), the spread of cynicism among publics and elites (Cappella & Jamieson, 1997), the diffusion of norms that grant social license to deceptive behavior, further amplifying its incidence (Gaber & Fisher, 2021; Schaffner, 2020), and the growth of a "culture of indeterminacy" that may demobilize citizens (Chadwick, 2019). Elites are more likely to be incentivized to mislead others if they perceive there is some power advantage to be gained (Nyhan & Reifler, 2015; Ross & Rivers, 2018). And most people are incentivized to avoid admitting that they have been deceived (Goffman, 1952). Researchers can contribute to civic efforts to reduce deception's prevalence, inform programs of education, promote more ethically responsible practice in the communication, journalism, and media professions, and render social, economic, cultural, and political elites more meaningfully accountable.

# **Mapping Deception's Variables**

We now set out the main themes in the study of deception: media-systemic distortions in the supply of information; the relational interactions that produce and activate cognitive biases; and the attributes, strategies, and techniques of deceptive entities.

### **Media-Systemic Distortions in the Supply of Information**

Attention to deception must go beyond individual-level variables—crucial though they are—to make connections with broader, media-systemic shifts. It is important to study structural distortions in media systems and the supply of information that derive from opaque or covert attempts to sway opinion.

Scholars are starting to learn more about the emergence of new, highly networked modes of quasi-organization that trade in obfuscation on key issues such as climate change, immigration, racial inequality, tax reform, and healthcare. These are hybrid assemblages of

covertly funded think tanks, astroturf lobbyists, "alternative media," documentaries, podcasts, and sponsored social media accounts (Bennett & Livingston, 2018; Helderman et al., 2021). This entails the need to identify ownership and control structures but also lay bare how the pursuit of power through deception can oscillate between decentralized and centralized strategies. It also entails shifting beyond a focus on the simple promotion of ideology and toward a focus on the increasing role of disruption, destabilization, and disorientation in deception (e.g., Chadwick, 2019; Elswah & Howard, 2020).

#### **Relational Interactions That Produce and Activate Cognitive Biases**

Cognitive biases do not occur spontaneously. Although they are often described as "hardwired," even the most ardent cognitive scientists maintain that biases are regulated by emotions and are the result of what Stanovich termed "overlearned associations" (Stanovich, 2011, p. 19). Cognitive biases are put there by past experiences and are made salient in contexts that matter for behavior. This inevitably requires a focus on attitudes and traits that render people vulnerable to deception. But it also requires longitudinal attention to deceivers' behavior patterns, their knowledge of others' biases, and the adaptive processes that deceivers and deceived undergo in moments of interaction that lead to deception (Buller & Burgoon, 1996).

Studies of cognitive biases from the 1950s onward revealed the logical flaws in everyday decision making and these findings have had a well-known impact on research on misperceptions (e.g., Tversky & Kahneman, 1974; Wason 1960). Work on motivated reasoning and confirmation bias is the mainspring of research on political misperceptions (Flynn et al., 2017; Kuklinski et al., 2000; Weeks & Garrett, 2014). Less often recognized is that some of the research on cognitive biases integrates relationality. For example, Kahan's (2013) theory of identity-protective cognition holds that individuals tend to process information in ways that help

them develop beliefs that "signify their loyalty to important affinity groups." In a self-defense strategy to maintain status, social support, belonging, and, ultimately, identity, people resist information that contradicts the dominant beliefs of the groups whose memberships they particularly value. The key point is that these beliefs can only exist in relational interdependence with the group and its leaders and develop over time. Accordingly, attempts to deceive may involve leaders manipulating the relational contexts that matter for individuals' identity and group formation, for example by increasing the circulation over time of false signals about how the beliefs and interests of the in-group are threatened by out-groups, to sow division and polarization. Manipulating relational contexts to exaggerate out-group threat has been part of U.S. conservative Republicans' encouragement of white in-group identity (Jardina, 2019). It was also a focus of the Russian Internet Research Agency's (IRA) deception campaigns during the 2016 U.S. election (Freelon et al., 2020).

Relationality also matters because people are more likely to be deceived if they observe identity-affirming false beliefs among those surrounding them, particularly when there appears to be a visible consensus among numerous others. Beliefs derive in part from the perception that others in one's social networks hold them (Bikhchandani et al., 1998). If there is some degree of consensus among other believers, and, if one lacks information that will counter that consensus, this gives information particular force based on what Kuran and Sunstein (1999) termed "availability cascades." People who have poor or incomplete information take the shortcut of basing their beliefs on the beliefs of others. Joining an emerging consensus, even if it leads to deception, is perceived as more likely to help one fit in and advance one's social status in that particular context.

Relationality is also evident in the research in cognitive psychology on "fluency." "Metacognitive experiences," or feelings about thinking, shape how people approach the task of making sense of a piece of new information (Schwarz et al., 2007). If one finds a task difficult—processing information that one has not previously encountered, for example—the task will be associated with negative feelings and mentally flagged. The flip side is that if one finds processing information easier because it has been encountered previously one is more likely to hold positive feelings toward the task and believe the information (Schwarz et al., 2007, p. 146). Repetition increases fluency, and fluency increases credulity. Fluency is therefore an outcome of iterative, relational encounters among people and with specific information.

These and other "illusory truth effects" have been well-documented in social psychology (Alter & Oppenheimer, 2009) and are increasingly being tested in empirical studies of misperceptions (Berinsky, 2017; Kim & Kim 2018; Pennycook et al., 2018; Walter & Tukachinsky, 2020). But there are plenty of opportunities for extending these lines of research in communication through close analysis of how information, symbols, and cognitive biases converge over time in interactive, repetitive encounters that may lead to deception via long term socialization processes. Again, technological design can matter here, as emerging research on how mobile access lowers cognitive access to news demonstrates (Dunaway & Soroka, 2021). Effron and Raj (2020) conducted a series of experiments that demonstrated repeated exposure to false information diminishes people's ethical dilemmas about sharing information their cognition reports as false. But people either intuitively (and incorrectly) perceive that the false information has a "ring of truth" about it or that it is in any case "already out there," so they feel they have ethical license to share it. And yet, a currently unexplored dimension here is that introducing false information may engineer these reduced ethical stakes. For example, rapid flooding of

social media networks can, if uncontested, shape perceptions of short term crises but the extent to which this shapes ethical licensing attitudes in the longer term is unknown.

Empirical research on gullibility also offers insight on relationality's role in deception (Forgas & Baumeister, 2019; Greenspan, 2009; Teunisse et al., 2020). Gullibility has pejorative origins in the folk wisdom that "over-trusting" people are easily manipulated. But there are two important counterpoints to this, which stress the importance of socialization, social relationships, communication, networks, and interaction. First, the empirical research shows that gullibility has surprisingly complex relationships with trust. More trusting individuals are actually more vigilant—not less—when encountering others in uncertain situations (Teunisse et al., 2020; Yamagishi et al., 2002). This is because high trusters tend to have extended social networks and use trust to manage the risks entailed in maintaining multiple social relationships. High trusters tend to interact with many other people and, as they do, develop greater sensitivity to signals of untrustworthiness through the "cognitive investments" they make (Yamagishi et al., 2002; Teunisse et al., 2020). In contrast, the socially isolated have fewer opportunities to expand their social relationships and therefore lack incentives to acquire the experience and skills that help identify untrustworthiness. The outcome of this relational context is that the socially isolated are more likely to be vulnerable to deception in the long term.

# The Attributes, Strategies, and Techniques of Deceptive Entities

If agency matters for deception, what forms does such agency take? Empirical research on deception has identified recurring strategies and techniques. Behavioral studies of confidence tricks, such as financial scams, have identified typical behavioral patterns and the manipulation of responses (Rubin, 2017; Williams & Muir, 2019). The richer the communicative engagement, the more likely it is that attempts to deceive will be successful (Dunbar et al., 2009). In line with

this work, there is recent evidence that engagement-rich deception online works because it can manipulate self-perceptions of identity. For example, the Russian IRA's deception campaign in the 2016 U.S. campaign recognized the importance of stimulating purposive engagement through social media behaviors such as clicks, likes, and retweets linked to racial representations (Freelon, et al., 2020). This further points to the need to not only trace the circulation of false information back to original attempts to deceive but also to be aware of the limitations of twentieth century models of propaganda based on simple, top-down, transmission-response assumptions.

Creating an impression of scarcity to elicit urgency has been shown to increase the probability of deception. The purpose is to generate a quick decision because this requires cognitive shortcuts and may miss information that a slower response might reveal. The pressure can be manufactured when a deceiver presents difficult-to-verify contextual information designed to cue the belief that an object is in high demand or all will fall into crisis and be lost (Cialdini, 2001; Stajano & Wilson, 2009). This technique works due to the signals conveying scarcity in the interactive context. We suggest that these mechanisms are constantly (and increasingly) in play in all forms of governmental and organizational communication and could be studied, especially during periods of crisis or heightened uncertainty.

Manufacturing a false impression of others' beliefs and actions also matters here.

Astroturfing, sockpuppetry, trolling, fake reviews, or "sybil" activity misleadingly manufacture reputational capital using online recommendation and review systems that afford the covert orchestration of social endorsement cues. But, to work, these processes require those who attempt to deceive establish and continually adapt the cues that falsely convey social proof of the wisdom of a course of action (Cialdini, 2001). Identifying precisely what these social proof cues

are, how and by whom they are created and circulated, and the extent to which they may be automated will be important for many years to come (Bimber & Gil de Zúñiga, 2020; Freelon et al., 2020; Innes et al., 2019; Lukito, 2020). Explanations of the influence of misleading social endorsement cues is only just beginning to emerge. The evidence to date suggests that they can reduce people's ability to identify false information but also their more general inability to distinguish truth from falsehoods (Luo et al., 2020).

The person, organization, or channel through which messages are conveyed operates as an important cue in people's truth judgments (Metzger et al., 2010) but the terrain has shifted as media systems have changed. This tradition of research dates back to communication's origins as a discipline when studies of attitudinal change identified the importance of source credibility in persuasion (Hovland & Weiss, 1951). Source credibility can, of course, be manipulated. Some research has traced the evolution of credibility cues and how technological design choices create affordances for deception based on audience misunderstanding. In an early experimental study of online news reception, Sundar et al. (2007) found that established offline news brands were associated with positive attributes, such as accuracy, professionalism, and trustworthiness. However, when the credibility of the brand was perceived as low, other technologically constructed cues unique to online news, such as recency and metrics of popularity through relatedness, became more important for signaling credibility. These online "bandwagon heuristics" can be manipulated to deceive audiences into accepting that news stories are credible if they are presented in a technological interface containing cues indicating popularity and recency.

The growing complexity of credibility cues in online settings clearly matters for deception, even though, to date, these have not been much tested empirically in work on

misperceptions. Metzger and Flanagin (2013) and Metzger et al. (2010) pioneered observational research on the heuristics individuals employ when deciding whether to trust information online. Their research supports the view of the individual as time-pressed and reliant on cognitive shortcuts to assess credibility. But crucially these shortcuts are afforded by the technological properties of the setting in which information is encountered and can be manipulated by those who seek to deceive (Metzger & Flanagin, 2013, 214–217). As well as the "reputation" of the outlet, people use the "endorsement" of others, including people they know, but also aggregated automated recommendations, as a heuristic for credibility. They search for "consistency" in the form of the same story being covered across different sources, even if the sources may differ hugely in editorial capacity. They check if the story agrees with what they know already, thus potentially activating their confirmation bias. People assess whether an article has overt "persuasive intent," which has been shown to provoke negative assessments of credibility driven by a hostile affective response to being manipulated—a theme that goes back to Hovland's work. If information meets these expectations, it is more likely to be accepted, even if it is misleading. Although these heuristics are technologically mediated, the amount of attention people pay to them is not fixed but varies and can be examined empirically. Under Metzger et al.'s modified dual processing model (2010) individuals evaluate online information more carefully when they feel highly motivated to devote attention; when motivation is lower, they are more likely to rely on heuristics—and be deceived.

We suggest there are connections between these themes and recent concerns about power asymmetries in political campaigning, as data-driven techniques create new vulnerabilities to deception (e.g., Dobber et al., 2020). In this case, specialized forms of expertise and knowledge acquired through harvested data, behavioral analytics, and mastery of digital advertising

platforms may be used to adaptively assess both the effectiveness of cues and individuals' susceptibility to deceptive cues in close to real time via the microtargeting of A/B tested messaging. There is now ample publicly available descriptive evidence that in the 2016 US campaign covert Russian disinformation operatives attempted to use Facebook's ad platform to sow division in key swing states such as Pennsylvania and Wisconsin and that political consultancy firm Cambridge Analytica microtargeted 3.5 million Black citizens in a voter suppression operation (Channel 4 News, 2020). A key concern is that the process of adaptive cueing, response, and repetition is automated, and occurs out of public view, rapidly and at scale. But the broader unanswered question concerns the influence these techniques have on voters (Kim et al., 2018). Here there is scope for exploring further credibility, cues, and heuristics in moments of exposure and any links with behavioral outcomes, such as voting or not voting, in ways that can undermine group interests. Traditional "campaign effects" research offers little inspiration or guidance.

One route involves exploring the manipulation of expectancy heuristics, again through consideration of technological design, but also of genre and discursive techniques, which communication researchers are well-placed to understand. Most of the "fake news" websites of the 2016 US scandal conformed with journalism's online genres (Chadwick, 2017, pp. 271–275; Tandoc et al., 2018). This genre mimicry is possible due to the democratization of the underlying web and database technologies on which news sites work, and partly because most "fake news" articles paraphrase or link to professional media sites (Benkler et al., 2018). When it comes to discursive techniques, some research on deception has shown that the narrative structure of successful clickbait tends to conform to linguistic rules that transcend superficial differences between news outlets. These include the use of demonstrative pronouns, the "forward-

referencing" of information, which does not then appear in the full story, the use of cataphora to present a story as emotionally and universally resonant, and the selective mention of parts of a linear or reversed narrative structure in a headline which cues a curious reader to try to learn what happened, only to be misled (Chen et al., 2015). The post-2016 research has paid little attention to these and other linguistic factors, even though they may be highly relevant for modulating messaging, especially in online settings. Related phenomena, such as the manipulation of cultural and lifestyle representations based on stereotypes, often using visual formats such as images with text overlays and memes, to sow polarization in coordinated online deception are also important (DiResta et al., 2018).

Finally, news organizations' changing sourcing practices render them more vulnerable to becoming unwitting, trojan-horse style deceptive entities in a media system characterized by interdependent recombinations of professional media, social media platforms, online forums, and private messaging. Reputation cues have often been reinforced by consistency cues when other reputable news organizations follow the pack, further giving a fake story "legs." Here there is a chain of deception: first media professionals are deceived; their audiences follow (Broersma, 2013). Some of the most difficult cases are when a source is believed to be credible by many outlets, fools editorial gatekeepers, or is amplified due to the commercial competition for audience attention and is accepted due to the credibility heuristics audiences apply to news outlets, but not the information itself. The 2016 and 2020 U.S. presidential campaigns exhibited this process multiple times, as professional media felt obliged to report on Trump's deliberately transgressive false statements (Chadwick, 2017). In the 2016 U.K. Brexit referendum campaign the blatantly false claim that EU withdrawal would allow £350 million a week of extra investment in the National Health Service (NHS) was prominently

displayed, along with illegal use of the NHS' official logo, on the Vote Leave campaign bus. Numerous images of the bus were dutifully relayed by broadcast news.

The shift to digital media has also disrupted longstanding sourcing conventions and practices in newsrooms, creating new vulnerabilities. News organizations have unwittingly amplified deception on social media, for example by embedding fabricated social media accounts as vox populi in their stories (Lukito et al., 2020) or by amplifying bizarre conspiracy theories such as Pizzagate and QAnon (Marwick & Lewis, 2017). In 2020, freelance journalists were unwitting recruits to another Russian IRA disinformation campaign that seeded news stories into left-wing Facebook groups (Nimmo et al., 2020). As we have shown, while there may be recurring behavioral templates in deception, those who seek to deceive adapt their tactics to the mediated context. They exploit knowledge of the cues that journalists look for (Burroughs & Burroughs, 2011). These cues are not just metrics of popularity and recency online, but also language and visual motifs that capture novelty, emotional outrage, wit, satirical commentary, or secrecy in the hunt for the scoop. These practices may also result in indirect effects (Gunther & Storey, 2003). Mainstream media coverage of Russian disinformation activity has probably reached greater numbers than were actually deceived by the activity. The coverage could itself lead indirectly to growing distrust of electoral institutions.

# **Conclusion: A Typology of Variables and Indicators**

We have argued that the concept of deception can augment research on misinformation, disinformation, and misperceptions because it is an interdisciplinary social scientific concept that connects intentions and information with attitudes and behavioral outcomes. Drawing on a range of literature and themes from across the social sciences, we defined deception as when an identifiable actor's prior intention to mislead results in attitudinal or behavioral outcomes that

correspond with the prior intention. We have also shown there are many ways these processes can be examined.

Our analysis leads us to advocate an approach that integrates media-systemic distortions in information supply; relational interactions that both produce and activate cognitive biases; and the attributes, strategies, and techniques of deceptive entities. We conclude here with a summary typology of ten variables and 57 focal indicators that we suggest form a holistic conceptual framework for future research. These are all drawn from the themes we have discussed. See Table 1.

#### - Table 1 here -

To research deception is to integrate (1) the attributes and actions of deceptive entities, including, for example, how they structure the supply of information at the media system level, promote their interests via strategic goals, initiate or withhold information flows, suppress evidence, or pre-organize their own willful ignorance. This also broadens out to encompass how they take advantage of (2) media-technological design factors but also how such factors create essential affordances for attitude formation and action. This perspective also necessarily integrates (3) the attributes and actions of the deceived, including their cognitive biases, which originate in (4) interactive relational encounters. Cues of untrustworthiness can be missed, particularly by those who are socially isolated and/or marginalized. Biases must be activated and made salient in contexts that matter for behavior, and those contexts can be manipulated. In these interactions, (5) temporal factors such as reciprocity cues, scarcity cues, urgency, rapid social endorsement, repetition, and fluency can all be manipulated in the short term and over time and (6) cues and heuristics of source and message credibility should be examined in detail.

Credibility cues are particularly important in the acceptance of information but can be

manipulated, as occurs with the recommendation and endorsement systems that saturate online communication. Cues of reputation and consistency are processed drawing on past experience and are shaped by the technological properties of specific mediated settings. The supply of credibility cues can be distorted due to flaws in editorial processes or hidden manipulation such as media hoaxes targeting journalists and coverage can itself unwittingly reduce political trust.

A focus on deception directs attention to interactions likely to lead people to unknowingly adopt distorted and false beliefs. (7) The false beliefs of the deceived may lead to behavioral change and (8) distorted political preferences but acts of deception also undermine (9) the social interests of the deceived and, finally, (10) legitimize and diffuse deception as an everyday communicative norm, due to amplification through further social licensing effects.

Together, these factors may erode important civic norms of reason-giving and evidential verification.

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Table 1. Deception: A summary typology of variables and focal indicators

Variable	Focal Indicators
1. Attributes and actions of deceptive entities	Degree of intentionality
	• Distorting supply of information at media-system level
	<ul> <li>Ownership and control of media</li> </ul>
	<ul> <li>Promoting sectional interests</li> </ul>
	<ul> <li>Covert or public hybrid assemblages</li> </ul>
	<ul> <li>Initiating or blocking information flows</li> </ul>
	• Increasing polarization by targeting in-groups to misrepresent out-group threat
	• Selective omission
	• Pre-structuring willful ignorance
	<ul> <li>Combining true and false information</li> </ul>
	<ul> <li>Trolling, disruption, and disorientation</li> </ul>
2. Media-technological design factors and their	Curated flows
affordances for attitude formation and action	• Elite or non-elite inception
	• Interface-derived social endorsement and consensus cues
	• Interface-derived credibility and authority cues
	Automated repetition
	Hijacked algorithmic prioritization
3. Attributes and actions of the deceived	Past social experience
	• Levels of attention
	Truth-default attitude
	<ul> <li>Motivated reasoning</li> </ul>
	• Identity-protective cognition
	• Gullibility through social isolation, marginalization, and
	low trust
4. Interactive relational encounters	<ul> <li>False information's point of origin</li> </ul>
	<ul> <li>Historical and/or short-term overlearned associations</li> </ul>
	• Richness of engagement
	• Non-transparent responsive testing (e.g., A/B)
	• Strategic ambiguity, on-the-fly
	• Diversion
	Comfortable counterfactuals
	Repetition, fluency, and ethical licensing effects
5. Temporality	• Suppression of evidence over time
	• Nondecisions
	• Information flooding
	• Speed, urgency, non-verifiability
	• Scarcity cues
	• Reciprocity cues
6. Credibility of source and message	• Consistency cues
	• Endorsement cues
	• Level of affective response to overtly persuasive intent
	• Genre mimicry
	Identity activation through manipulated cultural
	stereotypes

	Language: forward-referencing, cataphora
	C C 1
	Trojan horse media hoaxes
7. Role of false beliefs in consequential attitudes	Political anger
and behavior	Culture of indeterminacy
	Public cynicism
	Demobilization and apathy
	• The influence of presumed influence
8. Distortions of political/policy preferences	Affective polarization
	• False equivalence
	• Policy fiascos
9. Undermining the social interests of the	• Voting
deceived	• Non-voting
	• Collective harms—e.g., public health, financial
10. Legitimation of deception as a widespread public communicative norm	• Erosion of norms of reason-giving and evidential verification
	• Growing prevalence of expediency in the context of obvious moral imperative to minimize collective harm
	• Attempts at deception become part of "what it takes" to gain power