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Default to Truth in Information Behavior: A Proposed Framework for Understanding Vulnerability to Deceptive Information

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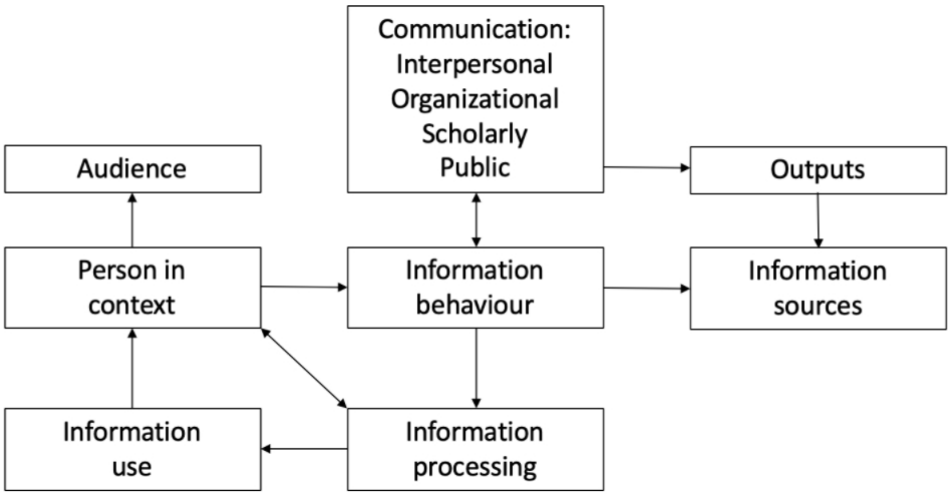

FIGURE 1 Wilson's (2016) General Theory of Human Information Behavior

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Default to Truth in Information Behavior:

A Proposed Framework for Understanding Vulnerability to Deceptive Information

ABSTRACT

Purpose: This article recognizes the challenge of identifying deceptive information and provides a framework for thinking about how we as humans negotiate the current media environment filled with misinformation and disinformation.

Design: We review the influence of Wilson's (2016) General Theory of Information Behavior in the field of information science and introduce Levine's Truth Default Theory (TDT) as a method of deception detection. By aligning Levine's findings with published scholarship on information behavior, we illustrate the fundamental similarities between TDT and existing research in information science.

Findings: We introduce a modification of Wilson's work which incorporates truth-default, translating terms to apply this theory to the broader area of information behavior rather than Levine's original face-to-face deception detection.

Originality: **False information, particularly online, continues to be an increasing problem for both individuals and society, yet existing information behavior models cannot not account for the necessary step of determining the truth or falsehood of consumed information. It is critical to integrate this crucial decision point in our information behavior models (e.g., Wilson's model) to acknowledge the human tendency to default to truth and thus providing a basis for studying the twin phenomena of misinformation and disinformation from an information science perspective. Moreover, this updated model for information behavior contributes the Truth Default Framework for studying how people approach the daunting task of determining truth, reliability and validity in the immense number of news items, social media posts, and other sources of information they encounter daily.** By understanding and recognizing our human default to truth/trust, we can start to understand more about our vulnerability to misinformation and disinformation and be more prepared to guard against it.

ARTICLE CLASSIFICATION: Research Paper

KEYWORDS: Information Science, Information Behavior, Misinformation, Information Theory, Trust, Communication Theory

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Information behavior (IB) involves studying humans interacting with various forms of information, and a key part of this interaction is evaluation - determining the quality, reliability, and validity of that information. While decades of research have been conducted on how people search for, manage, and use information [e.g., Bates, 2010; Borko, 1968; Savolainen, 2009; Wilson, 1981], not much has been done to examine how individuals detect and manage false information. Misleading information and the human ability to detect it is of increasing concern today because a sharp uptick in the use of social media as a key news source has revealed a startling amount of misinformation being spread through these platforms. Samuel-Azran, Yarchi, and Haya (2021) found that lower trust in media institutions is linked to higher susceptibility to believing misinformation and that widespread, general mistrust of the media is dangerous because it leads individuals to use fewer sources which then confirm an individual's existing views.

While researchers in the field of information science (IS) have not written extensively on detecting falsehoods, researchers in the field of social psychology have. Timothy Levine developed Truth Default Theory (TDT) to explain how individuals determine if others are truthful, including which factors are most effective in identifying truthfulness. This theory asserts that when humans communicate with others, they tend to "operate on a default presumption that what the other person says is basically honest" (Levine, 2014, p. 378). Because finding reliable information is a key goal of IB, TDT can be instrumental in illuminating how people decide which information is truthful, whether judgments are accurate, and indicate ways to improve this process.

Using T.D. Wilson's (2016) General Theory of Information Behavior as a foundation, this article demonstrates how TDT can be translated and used in IB research. Bates (1999) noted

that IS is a "meta-discipline" which often borrows theories from other fields, but these theories must be adapted so that their focus is truly information. More recently, Hall (2003) asserted that IS engagement with theory from other disciplines is important and can lead to practical solutions to real-world problems. Hall explains, "It is employed to systemize concepts and understandings into 'new' theory, or a version of existing theory from an information science perspective," (p. 288). Through this process of translation, we develop a framework which can serve IB researchers examining how people detect and interact with misinformation.

The authors begin by reviewing Wilson's theory and then introduce TDT, explaining Levine's theory in detail. In the next section, we align studies published in IS with key principles of TDT (Levine, 2014), to illustrate how research supporting each of the 13 elements of Levine's framework have previously been confirmed in IB research. The proposed framework of truth-default in IB is presented, followed by a discussion of its applications for future research.

LITERATURE REVIEW

Two theories are foundational to the new model being introduced in this article. The first is Wilson's (2016) General Theory of Human Information Behavior, which is reviewed and summarized below. Then we will introduce the second, Levine's Truth Default Theory. **These two theories represent the culmination of decades of work by each of these researchers, combining findings from empirical studies and insights gained throughout their careers as experts in their respective fields. For brevity, the literature review is an overview of each author's capstone paper that comprehensively describes their overall theories based on previous publications.**

Wilson's General Theory of Human Information Behavior

Wilson, as one of the first well-known names in information science, has had a significant impact on the field of information behavior. His work has evolved over time, adapting to reflect changes in individual and societal information behavior. When doing a simple search of Wilson on Google Scholar, one can see that two of his most popular writings "Human Information Behavior" and "Models of Information Behavior Research" have been cited a total number of 5,921 times to date. Among those citations is Choo's (1996) "The knowing organization: How organizations use information to construct meaning, create knowledge and make decisions" and Kuhlthau's (2004) "Seeking meaning: A process approach to library and information services", which are highly cited works as well.

According to Wilson (2016), IB models he developed throughout his career serve as a foundation for *A General Theory of Human Information Behavior* because, taken together, they exhibit all the characteristics of a theory. Wilson references Dubin's characterization of theories, stating that in order for a theory to be regarded as such it must: have ties to the area of interest, demonstrate how those ties are related, state why the ties are pertinent to the purpose, and highlight any limitations or exceptions that should be considered (Dubin, 1978, as cited in Wilson, 2016). Wilson's (2016) General Theory of Human IB (Figure 1) successfully meets these criteria, illuminating ties between an individual's interaction with information based on their needs and motivations behind information-seeking behaviors. Wilson describes information sharing, withholding, and exchanging, as well as collective and collaborative information, motivations driving the need for information, and successes and failures in obtaining information. However, Wilson does not go into specific detail regarding what takes place within the information processing portion, leaving

it "a 'black box' with contents unspecified" (2016, para. 45). Besides Dubin's characteristics, Wilson (2016) outlined additional criteria that should be met by general theories, including generalizability, applicability to a variety of circumstances, being cause-driven, explained or predicted by the cause, standing the test of time, generating hypotheses, and fit into its realm or field of study. **Wilson's General Theory of Human Information Behavior meets all of these criteria.** Wilson (2016) successfully makes the case that his body of work is considered a general theory of IB, and as such, provides a comprehensive look at IB and can be used to generate hypotheses.

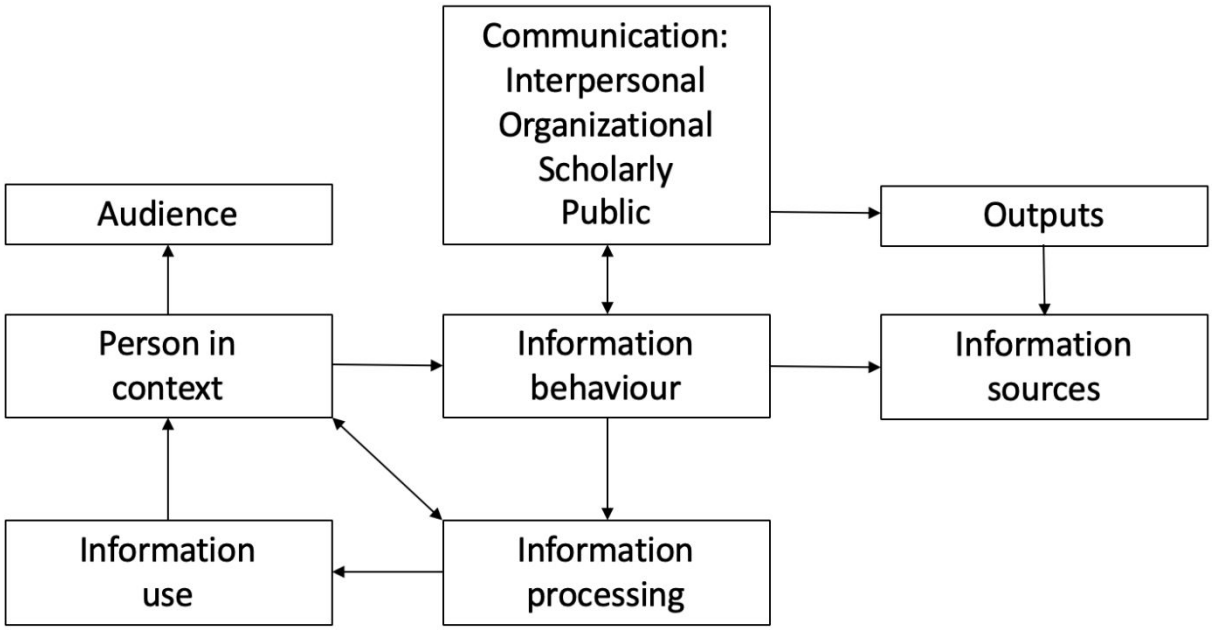

FIGURE 1 Wilson's (2016) General Theory of Human Information Behavior

Wilson's (2016) acknowledgement of social media as a newer form of communication post-dates his earlier models, yet the basics of IB still apply. Information sources generate messages for an audience, and the user in context must process and determine how to use that information. "Social media may be employed to discover information or exchange information

or even publish information" (Wilson, 2016, para. 37). Although Wilson has adapted and changed his model over time, one aspect that he has overlooked is the use and spread of misinformation. Misinformation has always been present in the information seeking and obtaining cycles, but today, more than ever, misinformation needs to be addressed and implemented into the current IB models. As access to information through various platforms grows and evolves, so does the spread of misinformation.

The following section introduces Levine's Truth Default Theory as a lens for modifying Wilson's General Theory of Human Information Behavior. Levine's research provides an additional piece of key IB that must be considered, the detection of misinformation and deception, which is increasingly problematic in the current media and information environment.

Levine's Truth Default Theory

This section introduces TDT as a lens to modify Wilson's General Theory of Human Information Behavior. Levine (2014) provides a concise summary of the body of research performed by himself and a number of colleagues over two decades focusing on lying and detecting lying in others. TDT emphasizes how these various studies are linked together, forming an overarching explanation of how individuals assess credibility and detect deception in others. Levine asserts that "when humans communicate with other humans, we tend to operate on the default presumption that what the other person says is basically honest" (Levine, 2014, p. 378). Previous theories of deception detection focused on cognitive effort, emotion, strategic self-presentation, and nonverbal behaviors, but Levine refutes these explanations by demonstrating that humans simply tend to believe each other in most situations. Rather than considering this a

failing of human judgment, Levine believes default to truth is highly adaptive to humans. Levine (2014) states:

> The truth-default enables efficient communication and cooperation, and the presumption of honesty typically leads to correct belief states because most communication is honest most of the time. However, the presumption of honesty makes humans vulnerable to occasional deceit (p. 378-379).

A significant amount of evidence must accumulate for someone to begin doubting the truthfulness of another individual. This "trigger" is the point where the accumulation of facts is taken seriously, and the individual begins to doubt their own initial assumptions of the other's truthfulness. The trigger is only activated once someone can no longer ignore their doubts and must acknowledge the lie. Levine (2014) explains:

> There are times and situations when people abandon the presumption of honesty, and the theory describes when people are expected to suspect a lie, when people conclude that a lie was told, and the conditions under which people make truth and lie judgments correctly and incorrectly (p. 379).

Humans are social creatures relying on the truthfulness of others to navigate our everyday lives. Gladwell (2020) notes the importance of this in describing one of Levine's studies (Levine, 2019) in which participants watched videos of students cheating on a test and were asked to determine if those students were telling the truth about cheating. Participants were only able to identify liars 56% of the time, barely more accurate than random chance. This led him to theorize that people tend to assume others are honest, thus overestimating the number of truthful responses and struggling to identify dishonesty. Levine (2014) believes this default belief provides an evolutionary advantage for survival as humans are often required to depend on others for important information.

PARALLELS BETWEEN TDT AND INFORMATION BEHAVIOR RESEARCH

Now that we have given an overview of Wilson's and Levine's theories, in this section we describe Levine's work in more detail and show how it aligns with previously published IB research. TDT emerged from a series of studies by Levine and his colleagues which reveal cohesive logic surrounding credibility assessment and deception detection (Levine, 2014). Each of these sub-areas of TDT is explained below and linked to IB studies with similar findings.

1. A Few Prolific Liars

Previous research has shown that most people are generally honest and that most lies come from only a few individuals (Levine, 2014).

The same principle has been examined on a larger scale within IB, examining the validity and reliability of information, including situations in which information is incorrect, either intentionally or unintentionally (Burkhardt, 2017; Stahl, 2006; Tudjman and Mikelic, 2003).

Tudjman and Mikelic (2003) recognized that the internet offers much trusted and up-to-date information in addition to some false and deceptive information. According to Stahl (2006), the problem arises from the unclear definition of what constitutes information and leads to misunderstandings and problems.

2. Deception Motives

The principle of deception motives indicates that deception becomes more likely in situations where it is difficult for an individual to communicate honestly and still achieve their goals, meaning that people generally lie in order to reach the desired outcome (Levine, 2014).

In IS research, Anderson (2018), acknowledged a similar motive to deceive through online IB evidenced by the demand for services such as fake tweet generators and websites that can fabricate entire conversations that look as if they occurred on particular social media platforms. Similarly, in their research on gender deception in online forums, Ho et al. (2017) found that an individual's personal motivation positively predicted their self-efficacy to deceive.

3. Projected Motives

This element of TDT asserts that people tend to look for underlying reasons why someone else might lie and they are more suspicious regarding truthfulness when they believe someone has a reason to lie in a particular context (Levine, 2014).

Researchers in IB have suggested that individuals are more likely to suspect deception if they distrust the source and its motives (Anderson, 2018; Moody et al., 2017). Moody et al. (2017) stated that a belief in the general honesty of others can lead individuals to fall prey to online phishing scams, while the awareness of deceitfulness or intent to cause harm in others

makes them less likely to open suspicious emails or click on provided links. Anderson (2018) stated that because fake websites and falsified images are now so sophisticated, they often do not provoke the skepticism that might previously have caused users to be suspicious of deceptive content, concluding that people can no longer rely on visual indicators to determine reliability, accuracy, or authority of digital information.

4. The Veracity Effect

According to Levine (2014), the phenomenon of veracity effect implies that people have a higher chance of being correct when judging truths than lies. This is because they are truth-biased, and therefore, are more likely to correctly identify truths as honest (i.e. veracity) but fail to identify lies as deceitful (Levine et al., 1999).

The principle of veracity effect has been discussed in the field of IB in relation to information seeking (Budd, 2010; Connaway et al., 2011; Wilson, 1983). The IB concept of satisficing relates to individuals' tendency to trust information that meets their basic needs due to being overwhelmed by an abundance of information sources and difficulty in identifying reliable sources (Case and Given, 2016). Connaway et al. (2011) found information seekers "satisfice", meaning they search through alternative available information until one meets their needs. for information that fulfills minimum requirements, preferring convenience, and ease to due diligence. Wilson's (1983) "Cognitive Authority" theory, indicates that people give authority to others to influence their thoughts on certain matters, especially when a person has proven trustworthy in that area.

5. Park-Levine Probability Model

The Park-Levine Probability Model extends Levine et al.'s (1999) study on veracity effect (Park and Levine, 2001). The model predicts that there is a positive linear relationship between the number of messages that are truthful and the average detection accuracy due to individuals' truth-biased nature (Levine, 2014).

Though IB studies have not applied this concept, to the best of our knowledge, an empirical study by Street and Richardson (2015) revealed that when people are forced into making a binary lie-truth decision, they are more likely to believe what others are saying is true, as opposed to lying. This is called the "Spinozan" account. This view holds that cognition is a two-step process. The initial process involves automatically believing a message, followed by the evaluative stage where people assess the message's veracity.

6. How People Really Detect Lies

Levine (2014) stated that in everyday life lies are detected through evidence proving falsehood or confession by the liar. Also, lies are most often identified after the fact. People are poor at recognizing deceptive information at the moment when they encounter it.

Sheremeta and Shields (2017) determined that information providers, whether deceptive or non-deceptive, are accepted by receivers as honest. The sender's credibility is more likely to invite trust than the ability of a receiver to judge lies (Bond and DePaulo, 2008; Law et al., 2018).

7. A Few Transparent Liars

Traditional perspectives support the belief that leakages, in terms of lies, happen due to the judge's inability to identify the cues. On the other hand, the Few Transparent Liars principle

holds that most people are good liars making it hard for the rest of the population to establish if they are truthful or not (Levine, 2010).

In IB, misinformation is a good example of this principle's application. A key characteristic of misinformation is its resemblance to real news (Karduni et al., 2019). Zhang et al. (2019) stated that the believability of fake news is increased by mimicking reputable authors' writing styles and using a tone often used in real news. This makes it very hard for people to distinguish between the truth and misinformation.

8. Sender Honest Demeanor

While some people generally seem honest, others are frequently doubted. Many factors contribute to a person's believability, yet the combination of these factors, their demeanor, has little to do with the person's honesty (Levine, 2014).

Similarly, individuals tend to use subjective, less reliable methods to judge the truthfulness of information rather than proven information literacy skills based on reliable evidence. According to Case and Given (2016), believability of information is often based on common beliefs, values, or knowledge with the receiver. They call this selective exposure, acquiring information aligned with already-held beliefs.

9. Content in Context

Content in context relies on a person critically analyzing information and the source from which it came, in order to determine the accuracy of that information. Much of this depends on whether or not a person is information literate (Levine, 2014).

As cited in Burch (2016, para. 1) "the American Library Association (ALA) defines information literacy as enabling an individual to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information." It is imperative for a person to understand the types of influences they encounter with people and information and be able to critically evaluate the information, instead of taking it at face value. Wilson terms this as cognitive authority and defines it as regarding information as credible or accurate, usually because an individual believes that the sender or owner of the information is knowledgeable in that particular area (1983).

10. Diagnostic Utility

"Information has diagnostic utility to the extent that it can be used to form a correct inference," (Levine, Blair, et al., 2014, p. 263). In the critical element of TDT, Levine asserts that people use many different factors to determine the truthfulness of others, but many of these can be erroneous and misleading.

Within IB, Wu and Liu (2020) found that deception takes place strategically over a period of time so temporal networks and analysis can offer insights into these deceptive exchanges. They also found that classification models based on dynamic network metrics and discourse network metrics improved deception detection. This helps highlight that diagnostic utility focuses on the factors that have been proven to help detect falsehoods and disregards useless or misleading factors.

11. Correspondence and Coherence

According to Levine (2014), the corresponding information is dependent on the person fact-checking the information, while coherence is dependent on "the logical consistency of communication" (p. 383). Simply stated, what Levine (2014) is trying to emphasize is that deception detection relies on a balance of how well people use evidence to validate the information they encounter and how well they understand that information, to begin with.

IB studies like Stahl's (2006) does really well in illustrating the fine balance of correspondence and coherence by stating, "truth is not a matter of correspondence between statement and external reality but has to do with negotiations in discourses, which, in turn, are shaped by power relationships and physical and mental discipline" (p. 88). Correspondence is often much easier to accomplish, where coherence can be a little harder to grasp because there are so many factors that can influence it. Stahl (2006) hints at coherence when discussing the power relationships and discipline needed in order to find the truth. Although coherence is not as easy as correspondence, one can begin to focus on it by trying to eliminate the noise and clutter surrounding the information, those who provided the information, and any other external influence.

12. Question Effects

Levine (2014) states that people have to know what questions to ask in order to retrieve useful answers that are not deceitful. "Question effects refer to the idea that how a potentially deceptive interviewee is questioned may impact veracity judgments, detection accuracy, coded verbal and non-verbal responses, or some combination of these outcomes" (Levine, Blair, et al., 2014, p. 263). Information is considered diagnostically useful if it can be used to make the correct conclusions.

Within IB, information retrieval is very similar to question effects. Information retrieval deals with recovering information useful or relevant to the query (Salton, 2003). Sembok et al. (2008) define it as that which "is concerned with the determining and retrieving of information that is relevant to a user's information need as expressed by his request and translated into a query which conforms to a specific information retrieval system" (p. 460). Thus, information retrieved is dependent on the keywords specified by the user and those assigned to the stored items (Salton, 2003).

13. Expert Questioning

Levine (2014) states, "expertise in deception is highly context dependent and involves knowing how to prompt diagnostically useful information rather than detection by passive observation of nonverbal communication". By this, Levine et al. (2014) are implying that experts are easily able to pin-point deceit and honesty from people, especially when they are familiar with the context; non-experts are also very reliable in detecting deceit but not to the extent of the experts.

Automated detection systems are being developed to screen the communication and behaviors of individuals with information technology systems. These systems can look through communication for malicious behaviors, deceitful communication, fraud, and security instructions. These systems rely on computational power to capture human behavior and interactions between people, technology infrastructures, information, and the organization (Nunamaker et al., 2016).

TRUTH DEFAULT FRAMEWORK IN INFORMATION BEHAVIOR

After establishing the parallels between Levine's Truth Default Theory and existing IB research, we present a new framework illustrating how the concept of truth-default is instrumental in IB. Rousseau et al. (1998) explained trust as being characterized by the interrelated processes of willingness to be vulnerable to someone else and expecting the other to act in a way that is beneficial, or at least neutral, toward the self rather than detrimental. Establishing trust in information, as opposed to trusting an individual, is challenging because it requires trust in complex technological and cultural systems that are extremely intricate (Haider and Sundin, 2020). However, critical assessment of information is not only important in relation to understanding individual pieces of news; it plays a crucial role in the shaping of an individual's knowledge, ignorance, and doubt (Haider and Sundin, 2020).

Levine's work focused on humans detecting deception in other humans and was developed within the discipline of social psychology. It does not address information specifically, and requires interdisciplinary translation work (Palmer and Neumann, 2002) in order to be used within the field of IB. Hartel (2014) explains, "Like conceptual analysis, translation work does not involve original empirical research or fieldwork; rather it entails a close reading of existing scholarship, with an emphasis on relevant ideas that may be scattered across disciplines," (p. 946. Palmer and Neumann (2002) recognize that terminology problems are inherent in communication between disciplines (e.g., Davies, 1989; White, 1996) and that translation must take place as researchers make connections between scholarly domains. When applying an idea from one domain to another, authors must "redefine new information, retaining essential elements of the original context while revising and reapplying it for their own purposes" (Palmer and Neumann, p. 107).

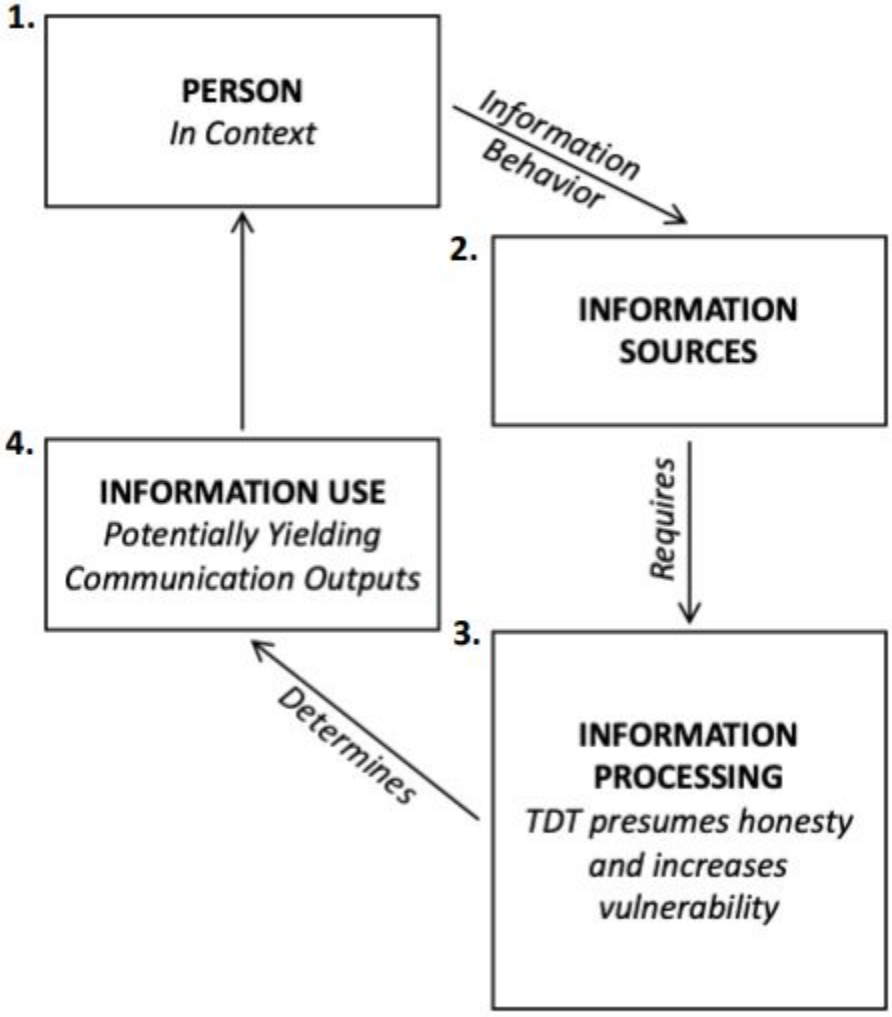

FIGURE 2 Truth Default Framework

The Truth Default Framework (Figure 2) in IB is presented as a visual representation of how deception detection is integrated into the information processing of an individual when they encounter information. This framework works in partnership with Wilson's (2016) IB model to

highlight the perspective of deception detection in information processing. **The numbers are used to provide a better understanding of the model.**

1. **The framework begins with the person in context engaging in information behavior, such as seeking or encountering information. While in some cases it arises from the recognition of an information need or want, hence purposive, in other cases it is serendipitous.**
2. **The second component of the model is information sources. Information can be obtained from information systems (e.g., libraries, online sources), upon systems (e.g., real estate or car sales agencies), and/or other people (Wilson, 2006).**
3. **Information source requires information processing. Information sources are presumed to be true unless there is overwhelming evidence to the contrary. This is truth-default at work in IB as opposed to the face-to-face personal interactions studied by Levine. This default to truth during information processing is advantageous because most information an individual encounters is true, saving the individual time and effort; however, it also increases the individual's vulnerability to deception**.
4. **The last element of the model is information use. Information processing determines how the information source will be used, both internally and externally, potentially yielding communication outputs. Depending on the person in context, untrue information tends to be disbelieved and not shared, while information presumed to be true is more likely to be believed and shared with others.**

How a person, in context, encounters and processes information affects their understanding of the information and how they decide to act upon that information.

APPLICATION OF TRUTH DEFAULT FRAMEWORK

Considering the proposed framework's integration of deception detection and truth-default into IB, potential uses for this framework are numerous. In this section, we discuss applications of the new framework in IB research as well as future research into the connections between TDT and IB.

Social Media

While the intersection of TDT and IB can be seen in various contexts, social media is a particularly salient example. People are increasingly turning to social media for news, driven by both convenience and the speed with which new information is available, despite its questionable quality (Heravi and Harrower, 2016). Unfortunately, the sheer number of posts and their perceived quality are often used to judge the trustworthiness of a social media account, even by trained journalists (Heravi and Harrower, 2016). In the modern information ecosystem, it is common to experience information overload, and much of the information encountered presents conflicting messages (Hameleers and van der Meer, 2020). Individuals use heuristics to attempt to discern between reliable information and misinformation, including salient features, cue prominence, and credibility cues (Flanagin et al., 2020). If the information aligns with prior held beliefs, a person is more likely to view it as credible, while information conflicting with prior held beliefs are likely to be viewed with skepticism and doubt (Hameleers and van der Meer, 2020). When attempting to discern truth in information, people often interpret facts through the

lens of their partisan political beliefs and are more likely to accept misinformation if it resonates with strongly held beliefs (Hameleers and van der Meer, 2020).

People can be incidentally exposed to misinformation via social media and the online social networks as it is shared, liked, or commented upon by their friends (Müller and Schulz, 2021). Perceived credibility of information can vary widely between individuals based on subjective beliefs about its source and reliability (Flanagin et al., 2020). Complicating this task further, information is increasingly provided by unfamiliar sources, increasing the difficulty of discerning truth by the individual (Flanagin et al., 2020). Increased adoption of and experience with the Internet causes people to feel increased confidence in their abilities to navigate it successfully, and they may become less concerned about the risks involved, even though they are aware of them (Büchi et al., 2017; Dutton and Shepherd, 2006). Unfortunately, trusting news and information accessed on social media exposes individuals to certain degrees of risk and makes them vulnerable to deception or even exploitation (Yamamoto et al., 2021).

Based on TDT, social media users will tend to believe the information they read. "Absent deceptive intent, awareness, or purpose, a message is considered honest," (Levine, 2014, p. 379). "The truth-default involves a passive presumption of honesty due either to (a) a failure to actively consider the possibility of deceit at all or (b) as a fallback cognitive state after a failure to obtain sufficient affirmative evidence for deception . . . The possibility that a message might be deception often does not come to mind unless suspicion is actively triggered," (p. 381). If social media users find information compelling or meaningful, they may share it within their social networks.

TDT does not rely on the sender's demeanor or nonverbal cues to reveal deception; instead, it focuses on contextualized communication content. "Most lies are detected either through comparing what is said to what is or what can be known, or thorough solicitation of a confession" (Levine, 2014, p. 382). This makes it clear face-to-face contact is not necessary to detect deception, opening the door for exposing falsehoods in digital contexts such as social media. Furthermore, Levine (2014) points out that "most lies are told by a few prolific liars," (p. 383); therefore, we may be able to educate social media users in how to detect these major offenders, increasing deception detection of social media users and improving the reliability of the information being shared. Reviewing IB through the lens of TDT reveals ties between accepted IB theory and Levine's body of work in detecting truthfulness in one-on-one communication.

Culture and Religion

The truth-default in IB framework can also be applied within cultural and religious contexts. Culture is usually taught from one generation to the next, carrying expectations that keep it alive for generations to follow. It can also be taught through the environment in which people live. Many environments are a blend of culture and religion, making it difficult to tell which attributes are cultural versus religious. In many Middle Eastern countries, for example, these realms of religion and culture are so integrated that people may confuse a cultural practice for a religious one. This can be explained by Cohen and Hill (2007) and their definition of "collectivistic culture":

Collectivistic cultures that are more often studied (e.g., Hindu India and several East Asian countries), certain religious cultures value social connections as an integral element of religious life, and group affiliations are seen as important, even defining, parts of religious identity. In collectivistic religious cultures, people are seen as fundamentally connected with each other and their communities.

Due to the nature of culture and religion, a lot of information is shared from person to person. According to Levine (2014, p.378) :"when humans communicate with other humans, we tend to operate on the default presumption that what the other person says is basically honest". TDT in IB can be seen in practice in these areas because when people seek information about culture and religion, it is often under the presumption that the information being provided is truthful because religious leaders are trusted implicitly. However, humans are fallible, and miscommunication is common. Describing deception, Levine (2014) includes omission, evasion, and equivocation, which are often employed in discussions of sensitive and highly personal subjects involving culture and religion. The truth-default in IB framework could be used to help researchers understand behavior patterns and trust in cultural and religious communities.

Future Research Connecting IB and TDT

Extending this work to determine how Wilson's theory and IB in general work with the Park-Levine Probability Model, diagnostic utility, and expert questioning is vital to furthering this research. For example, based on the Park-Levine Probability Model, most messages people receive and send are honest because people are truth-biased in their everyday life, in face-to-face

interactions, and when they know the person they are talking to. However, when they know the sender tends to be deceitful, people are more likely to distinguish truth from lies (Levine et al., 2006). The Park-Levine mathematical equations could be converted to a graphic representation of key concepts more useful for IB research.

Previous studies have employed TDT to study IB of university students (Levine, Blair, et al., 2014; Levine, Clare, et al., 2014; Levine et al., 2006; Levine et al., 1999; Levine et al., 2011; Park et al., 2002), and it can be applied in any context requiring credibility assessment and deception detection. Causality is demonstrated when an individual does not trust an information source and seeks other sources to verify the information. TDT provides explanations for why people are truth-biased. All human cultures, religions, and most legal systems prohibit deceit, and most people are taught not to lie from a very young age (Levine, 2014). TDT allows for hypothesis generation as well. Levine et al. (2006) generated six hypotheses to test the Park-Levine Probability Model of deception detection accuracy in an empirical study, revealing that accuracy is a function of message veracity base-rate. TDT exhibits timeliness and extendability to multiple contexts. Research using TDT will likely grow as the popularity of social media increases, and people must determine the accuracy of what they read on these sites. TDT can be expanded by merging it with other IB models and theories. It deals with deception detection, an underlying need in all situations where information is being exchanged, and therefore can be applied in any situation where IB is being studied.

CONCLUSION

This article began by acknowledging the proliferation of misinformation and disinformation in today's media and information environments and establishing the need for

addressing deception detection within IB. After reviewing Wilson's theory and introducing Levine's TDT, the authors demonstrated how published IB research supports all of the underpinnings of TDT. As a result, the Truth Default Framework addresses trust and truth in IB and demonstrates areas where the framework can be applied in IB research.

Human interaction with information has become increasingly complex in the age of technology. A vital part of human IB is evaluation, and this task has become exponentially more complicated as social media platforms have become key sources of news and information for millions of people around the world. Individuals no longer simply seek out and absorb information; instead, they are bombarded with information they did not set out to find, confronted with the task of determining its validity, and then deciding how to respond. Unfortunately, misinformation and disinformation are widespread on social media platforms, and consequently, determining the truth and validity of information encountered is more crucial than ever. The more than two decades of research Levine conducted on the ability of individuals to detect lies in various situations has direct application to the need for identifying false information online. With TDT, Levine (2014) asserts that humans tend to presume honesty in others in most situations, and IB research in the IS field echoes similar findings (e.g., Bond and DePaulo, 2008; Law et al., 2018; Zhang et al., 2019).

False information, particularly online, continues to be an increasing problem for both individuals and society, yet existing information behavior models cannot not account for the necessary step of determining the truth or falsehood of consumed information. It is critical to integrate this crucial decision point in our information behavior models (e.g., Wilson's model) to acknowledge the human tendency to default to truth and thus providing a basis for studying the twin phenomena of misinformation and disinformation from an information science perspective. Moreover, the Truth Default Framework in information behavior contributes a basis for studying how people approach the daunting task of

determining truth, reliability and validity in the immense number of news items, social media posts, and other sources of information they encounter daily. By understanding and recognizing our human default to truth/trust, we can start to understand more about our vulnerability to misinformation and disinformation and be more prepared to guard against it.

This article revised and applied Levine's theory to IB because it addresses a critical issue experienced by many people in everyday life - the need for deception detection. As information scientists we have numerous opportunities for future research into how truth-default affects individuals' understanding of information which, in turn, determines how they respond to that information. The Truth Default Framework has the potential to contribute substantially to our understanding of how misinformation and disinformation spread through the modern media landscape.

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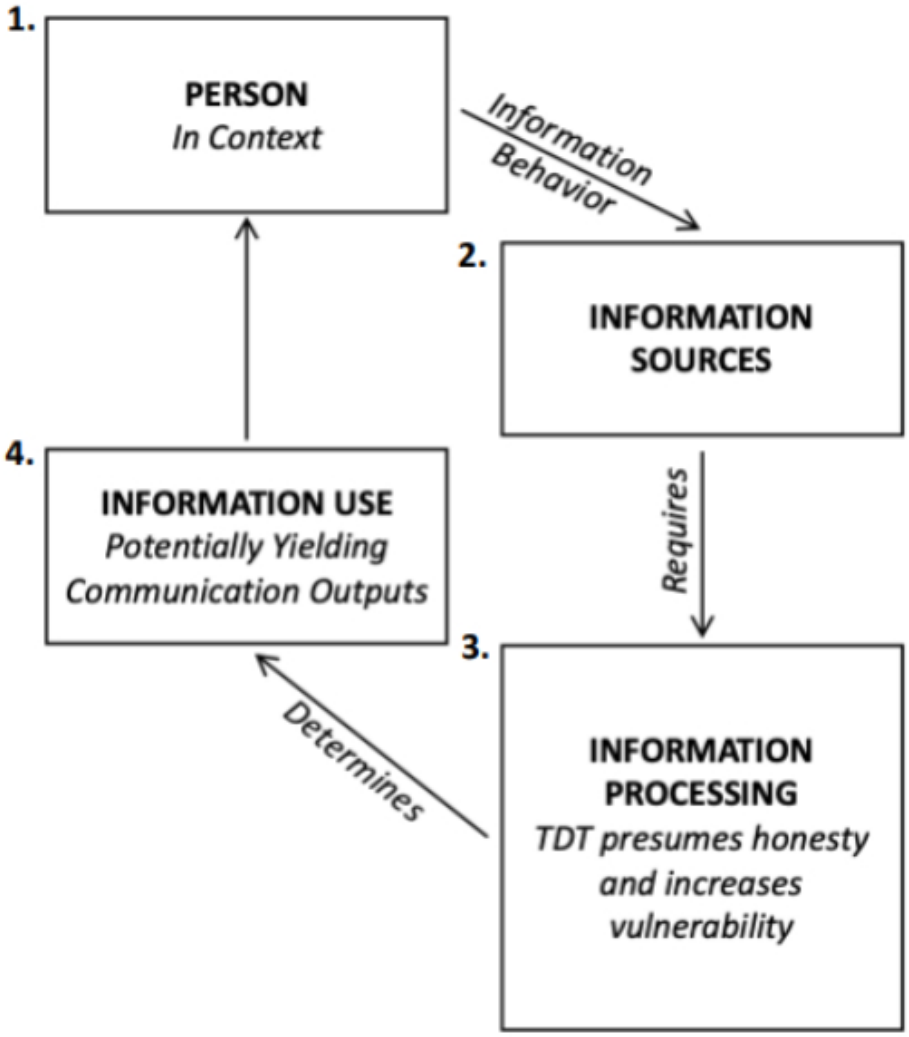

FIGURE 2 Truth Default Framework

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