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Planned Risk Information Avoidance: A Proposed Theoretical Model


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Risk information avoidance is widespread, and happens in contexts ranging from the personal to civic spheres. Disciplines from communication to psychology have been exploring the avoidance phenomena for decades, yet we lack a unifying theoretical model to understand it. To develop such a model, we start with the planned risk information-seeking model (PRISM) and explore its tenets, and related research, as they apply to information avoidance. We end with a theoretically sound planned risk information avoidance (PRIA) model and accompanying propositions in three overarching areas: cognitive, affective and socio-cultural. This model shows promise in advancing our collective understanding of the PRIA phenomenon.

Keywords: Risk, Information Avoidance, Information Seeking, Theory of Planned Behavior (TPB), Risk Information Seeking and Processing Model (RISP), planned risk information-seeking model (PRISM).

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Risk information avoidance is a widely occurring communication phenomenon that ranges from the personal (as when individuals choose to avoid health information, (Brashers, Goldsmith, & Hsieh, 2002) to the civic (as when officials avoided information about lead in Flint's [MI] water supply [The Office of Governor Rick Snyder, Task Force on Flint Water Advisory, 2016]). In this way, risk information avoidance can have serious consequences for individuals as well as corporate and civic bodies. Despite these high stakes, the topic as a whole has been relatively understudied, at least in comparison to information seeking. As a result, researchers from multiple disciplines, including communication, have begun to theorize about the drivers and characteristics of information avoidance (Barbour, Rintamaki, Ramsey, & Brashers, 2012; Case, Andrews, Johnson, & Allard, 2005; Narayan, Case, & Edwards, 2011; Sweeny, Melnyk, Malone, & Shepperd, 2010). In this piece, we seek to

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synthesize the information avoidance research that has emerged across disciplinary boundaries, and propose a “model of reality” for planned risk information avoidance (PRIA) (McPhee & Poole, 2016). Models of reality are generated to help identify variables of interest within a phenomenon and to guide emerging research design and theory (McPhee & Poole, 2016). In developing our model, we conceived of information avoidance as a deliberate behavior and a risk-related phenomenon (Barbour et al., 2012; Case et al., 2005; Griffin, Dunwoody, & Neuwirth, 1999; Narayan et al., 2011; Slovic, Finucane, Peters, & MacGregor, 2004).

Researchers who study risk typically see it as constituting three major elements: risk as analysis, politics and feeling (Slovic et al., 2004). This suggests that cognitive, sociocultural and emotional variables contribute to risk processes and outcomes. In building our model of reality to address PRIA as a risk behavior, we sought guidance from existing information management models that drew from these three groups of variables. Specifically, we turned to the research on information seeking, including the theory of motivated information management (Afifi & Weiner, 2004), the comprehensive model of information seeking (Johnson & Meischke, 1993), the health information acquisition model (Freimuth, Stein, & Kean, 1989), the extended parallel processing model (EPPM; Witte, 1992), the risk information seeking and processing model ([RISP] Griffin et al., 1999)¹ and the planned risk information-seeking model (PRISM; Kahlor, 2010).

We focused most heavily on the PRISM framework as it makes explicit reference to many of the linkages depicted in the other aforementioned models (see Kahlor 2010 for a review of the related literature), focusing on deliberately planned information seeking behavior, and it combines a range of cognitive, sociocultural and emotional factors to explain risk information seeking (Eastin, Kahlor, Liang, & Abi Ghannam, 2015; Kahlor, 2010). This dovetails with our theoretical conception of PRIA. The PRISM also explains a consistent range of variance in information seeking intent (from 34 to 64%), and has been applied across an array of risk contexts (Eastin et al., 2015; Ho, Detenber, Rosenthal, & Lee, 2014; Hovick, Kahlor, & Liang, 2014; Willoughby & Myrick, 2016). This ensured our model was developed with an eye to both theory and data (Frigg & Hartmann, 2017; MCPhee & Poole, 2016).

Undertaking theory-rich work of this type is useful for three main reasons: (a) It facilitates a synthesis of what has already been done in order to stimulate thinking on how the three major types of variables (cognitive, sociocultural and emotional) apply to PRIA; (b) it furthers our understanding of this phenomenon as worthy of study in its own right (Barbour et al., 2012; Narayan et al., 2011; Sweeny et al., 2010); and (c) it acknowledges that PRIA is both an outcome *and* a process. Interestingly, within the communication field, information avoidance has typically been examined as an unwelcome outcome, with some notable exceptions (Barbour et al., 2012; Yang & Kahlor, 2012). Here we eschew the assumption of undesirability and instead seek to crack open the “black box” of avoidance processes.

Literature review

The concepts of risk and risk perception are central to this effort. Risk is an integral part of the human experience and risk perception is an important factor in how people evaluate issues and topics ranging from climate change (Rickard, Yang, Seo, & Harrison, 2014) to diet (Fung et al., 2018). Kasperson et al. (1988) define the concept of risk as “the probability of events and the magnitude of specific consequences” (p. 177). Assessments related to the presence or absence of risk are often referred to as risk judgments and focus on the likelihood of a risk occurring, as well as the perceived severity of the impact. Brewer et al. (2007) further define risk judgments in terms of likelihood as well as susceptibility, with likelihood addressing the probability of being harmed in certain conditions and susceptibility addressing one’s physical vulnerability. Perceptions of risk extend beyond these probability focused judgments and include a range of factors, such as who or what is impacted by the risk (self, community or environment), the risk-benefit balance, immediacy of the risk, the voluntariness of the risk, institutional trust, and how the risk makes people feel (Gregory & Mendelsohn, 1993; Griffin et al., 1999; Slovic, 1987, 2001; Yang, Aloe, & Feeley, 2014).

The affective components of risk perception are most frequently explored in terms of negative valence, and the negative feelings are described in the literature as fear, dread, and/or worry; each appears strongly correlated with other risk perceptions such as risk severity judgments (Griffin, Neuwirth, Dunwoody, & Giese, 2004; Witte, 1992). The research further suggests that these perceptions can result from risk communication, often informally.

Risk communication is an umbrella term for communication about “(...) uncertainty and certainty, danger and safety, and security and insecurity” (Cho, Reimer, & McComas, 2015, p. 1). We borrow our conception of risk information seeking from the PRISM that refers to the active seeking of risk-related information, and our conception of risk information avoidance is also based on the PRISM, referring to the active avoidance of risk-related information (Kahlor, 2010; Yang & Kahlor, 2012). Here we note that risk information avoidance is distinct from inertia, which is habitual *inaction* in service to the status quo (Polites & Karahanna, 2012). Risk information avoidance is a process of *actively* avoiding information, such as changing a TV channel or asking a group to switch conversation topics. The main difference between risk information avoidance and inertia lies in whether action (risk information avoidance) or inaction (inertia) occurs. This conceptualization is similar to that posed by Griffin et al. (1999) in the original RISP model which defined information avoidance as a concept where “(...) some may simply not pay attention, while others might go out of their way to avoid such information” (p. S238). Research also suggests that information avoidance is distinct from information selection and seeking, as well as an important and common information management behavior (Barbour et al., 2012; Narayan et al., 2011). Additionally, our model conceives of risk information avoidance as a

deliberate behavior (Kahlor, 2010), meaning that we focus on PRIA as both a deliberate *and* active avoidance of information.

Despite the ubiquitous nature of information avoidance, research into the phenomenon is still unfocused (Narayan et al., 2011; Sweeny et al., 2010). What we do know is that investigators have characterized information avoidance as active or passive, self-or-other-oriented, and resulting from negative or positive, as well as known or unknown information (Narayan et al., 2011; Sweeny & Miller, 2012; Sweeny et al., 2010; Yang & Kahlor, 2012). It remains relatively unknown who is most likely to avoid information, particularly in risky contexts. The research that has examined individual, dispositional motivations for avoidance has focused on how information avoidance occurs in relation to need for closure (Sweeny et al., 2010), the desire to maintain a consistent self-concept (Narayan, et al., 2011), managing uncertainty (Barbour et al., 2012), and/or as a way to control fear (Witte, 1992). We turned to PRISM to provide guidance in exploring information avoidance further.

PRISM

The PRISM maps psycho-social determinants of intentions to seek information about risks (Kahlor, 2010). PRISM is an extension of the RISP model (Griffin et al., 1999). The RISP model ambitiously merged research on risk perception, the theory of planned behavior (TPB), and information seeking and information processing, acting as a key information model for risk communication theory and practice (for a review see Yang et al., 2014). The RISP model identified several key predictors of information seeking within the context of risk, including individual characteristics, perceived hazard characteristics, affective response, subjective norms (labelled informational subjective norms), information sufficiency, perceived behavioral control (labelled perceived information gathering capacity, or PIGC), and beliefs about communication channels (Griffin et al., 1999; Griffin, Dunwoody, & Yang, 2012). The RISP model has been shown to have wide applicability in risk contexts ranging from climate change (Yang & Kahlor, 2012) to urban flooding (Griffin et al., 2008). PRISM is distinguished from the RISP through its conception of information seeking as a deliberately planned information seeking behavior (Eastin et al., 2015), and through its theorization of new relationships among the variables depicted in RISP and the TPB (Kahlor, 2010).

The TPB, from which both the RISP and PRISM drew factors, is a cognitive-behavioral theory that suggests cognitions (namely attitudes, perceived behavioral control and perceived norms) drive behavioral intentions, which in turn drive behaviors (Ajzen, 1991; McEachan, Conner, Taylor, & Lawton, 2011). PRISM mirrors the RISP use of the TPB's concepts of norms and perceived behavioral control (PBC). And consistent with Kahlor's 2007 effort to develop an augmented RISP model, the PRISM also uses the TPB's concepts of attitudes and behavioral intentions (Kahlor, 2010). Although to date, PRISM studies have focused on information seeking intentions as the dependent variable of interest, a notable critique of

the TPB is that intentions may not be strongly related to actual behaviors (Dixon, Deline, McComas, Chambliss, & Hoffmann, 2014; Webb & Sheeran, 2006). This suggests the study of PRIA *behaviors* in addition to PRIA intentions would be a fruitful approach. To our knowledge there have only been two studies that explore the range and variation of information avoidance behaviors *in situ* (see Barbour et al., 2012; Narayan et al., 2011), thus more research is needed.

The PRISM concept of attitudes is consistent with the TPB and refers to favorable and unfavorable evaluations of the behavior—in the case of PRISM, information seeking (Dixon et al., 2014; Kahlor, 2010). In a meta-analysis of the TPB, attitudes had the most influence on intentions (McEachan et al., 2011). Recent work on attitudes and avoidance from a RISP perspective shows positive relationships between avoidance attitudes and avoidance intentions (Fung et al., 2018), while other work shows negative relationships between risk information seeking attitudes and avoidance (Yang & Kahlor, 2012). In applications of PRISM, attitudes surface as having positive relationships with risk information seeking intentions (Hovick et al., 2014; Willoughby & Myrick, 2016).

PRISM also employs the concept of subjective norms, originating from the TPB and also used by the RISP (Ajzen, 1991; Griffin et al., 1999). The TPB refers to subjective norms as perceptions of social pressure to enact (or not) a given behavior (Ajzen, 1991). Within TPB research, norms have been found to directly impact intentions (McEachan et al., 2011). The concept of subjective norms was identified as an important contributor to information seeking, avoidance and processing in the RISP model, which originally depicted norms as working through information sufficiency (Griffin et al., 1999, 2012). Later RISP work found that norms had direct relationships with information seeking, and consequently amended the model to reflect this direct relationship (Griffin et al., 2008, 2012; Yang et al., 2014). Some RISP work has found that subjective seeking norms appear to have a strong relationship with risk information avoidance (Yang & Kahlor, 2012), while other work shows informative subjective norms (perceived expectations about learning about the risk) were negatively related to information avoidance (Dunwoody & Griffin, 2015). In relation to the PRISM model, subjective seeking norms often surface as the strongest driver of information seeking intent (Hovick et al., 2014; Kahlor, 2010).

We turn from norms to the concept of PBC, which refers to perceptions of one's abilities to act (Ajzen, 1991). The concept was originally defined in the TPB as perceived barriers or resources to undertaking the behavior (Fishbein & Ajzen, 2011). Within TPB health studies, it has the second strongest effect on behavioral intentions in general, after attitudes (McEachan et al., 2011). In the RISP model, the PIGC is understood to be driven largely by PBC and is also seen as an important contributor to information seeking, avoidance and processing (Dunwoody & Griffin, 2015; Griffin et al., 1999). Recent work using the RISP model with a PBC variable showed a negative relationship with avoidance (Yang & Kahlor, 2012). In applications of PRISM, PBC is identified as perceived seeking control and often

surfaces as among the least powerful relationships with seeking intentions (Eastin et al., 2015; Ho et al., 2014; Hovick et al., 2014; Kahlor, 2010).

The PRISM also draws additional relationships from the RISP, which asserts that people seek and process risk information because they want to be confident that they have an accurate understanding of a risk topic: this is termed information sufficiency in the RISP model (Griffin, et al., 2012). The RISP suggests that perceived insufficiency motivates increased systemic processing (Griffin et al., 2012). This concept is based on the sufficiency principle (Eagly & Chaiken, 1993), which emerged in the heuristic systematic model (HSM) of information processing and posits that “perceivers who are motivated to determine accurate judgments will exert as much cognitive effort as is necessary (and possible) to reach a sufficient degree of confidence that their judgments will satisfy their accuracy goals” (Chen & Chaiken, 1999, p. 74). Interestingly, recent RISP-based work suggests that information insufficiency is negatively related to information avoidance (that is, the more perceived insufficiency, the less likely information avoidance [Dunwoody & Griffin, 2015]).

Additional factors that the PRISM draws from the RISP affect information sufficiency: risk perceptions from the RISP’s hazard characteristics, and affective risk responses. Risk judgments and perceptions pertain to evaluations of a threat and are related to characteristics such as perceived risk severity or risk attribution (Kahlor, 2007; Yang et al., 2014). Affective risk response refers to whether more or less positive or negative feelings occur in response to risk perceptions (Kahlor, 2007).

The PRISM incorporates elements of the RISP and TPB (the latter in its entirety) into its model and therefore provides three major areas for theory development: the cognitive (attitudes, PBC, risk perceptions); the affective (affective risk responses); and the sociocultural (social norms).

The proposed model of PRIA

When developing models of reality, which articulate key variables, a major consideration is the array of information that is used in model construction (McPhee & Poole, 2016). To develop a PRIA model, we decided to address one of each of the sociocultural, cognitive and emotional variables that PRISM identifies as motivators of risk information seeking intentions and behaviors. This ensures we are modeling from theory *and* empirical evidence in the information management literature (Frigg & Hartmann, 2017). We then examined the literature with these risk information-seeking variables in mind. However, we also move beyond these variables to locate other potential concepts in the literature that may contribute to PRIA (see Figure 1). While this proposed PRIA model lacks parsimony, it is appropriate for an understudied, under-theorized and scattered research space; future empirical testing will clarify the model’s core variables and relationships (Edmondson & McManus, 2007; MCPhee & Poole, 2016).

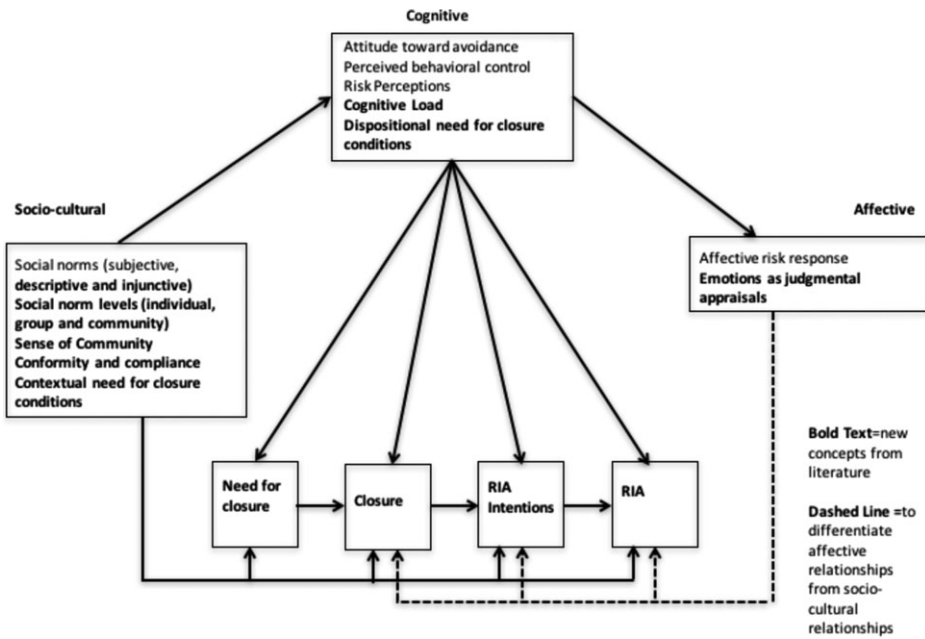


Figure 1 PRIA model.

To make the model more accessible, we use a risk scenario that allows us to explore several propositions in more concrete terms: a devastating earthquake in the Cascadia subduction zone of the Pacific Northwest. This earthquake is expected to impact 104,000 square miles in the Pacific Northwest of the United States, and Canadian and American projections indicate at least 13,000 fatalities (Schultz, 2015). We selected this topic as a narrative device, but also note that earthquake risk communication has long been a challenge in the United States and around the globe (Flynn, Slovic, Mertz, & Carlisle, 1999; Han, Lu, Hörhager, & Yan, 2017; Mayhorn & McLaughlin, 2014; McComas, Lu, Keranen, Furtney, & Song, 2016).

Sociocultural factors

Sociocultural factors influence individuals in myriad ways. Here we focus on one specific factor identified in the TPB, the RISP and the PRISM (social norms) and one that the literature suggests might also be relevant in the context of PRIA (sense of community [SOC]).

Norms

Social norms are socially coordinated codes of conduct that detail ways of acting (Rimal & Lapinski, 2015). Because they entail social coordination, they are inherently communication constructs. Research has identified three major types of norms: injunctive, descriptive and subjective (Cialdini, 2007; Park & Smith, 2007).

Descriptive norms pertain to perceptions of the frequency of other's behaviors within a given social context, and are motivated by people's desire to behave appropriately (Rimal & Lapinski, 2015). Injunctive norms are perceptions of others' approval or disapproval of behaviors that appear to be motivated by social sanctions (Cialdini, 2007; Lapinski & Rimal, 2005). In this way, descriptive norms are contextual (regarding behaviors within specific places) while injunctive norms are more general rules irrespective of context (Goldstein & Cialdini, 2007). The third type of norm is found in the TPB, the RISP and the PRISM models—subjective norms or perceptions of others' expectations for behaviors (Fishbein & Ajzen, 2011; Griffin et al., 1999; Kahlor, 2010).

Here it is important to note that in regards to the concept of social norms, the field appears to be subject to jingle-jangle fallacies, defined as when different constructs are labeled the same by different researchers, or similar constructs are labeled differently (Oreg, Vakola, & Armenakis, 2011). The jingle-jangle phenomenon serves as a reminder to theorists that they must reach far and wide across disciplines when explicating important research concepts. For instance, regarding the TPB it appears the authors intended the term “subjective norm” to refer to an injunctive norm, yet the formulation focused on “(...) perception(s) that important others prescribe, desire or expect the performance or non-performance of a specific behavior” (Fishbein & Ajzen, 2011, p. 131). This focus on expectations seems conceptually different from what other scholars deem injunctive norms to be, namely perceptions of approval or disapproval driven by social sanctions (Cialdini, 2007; Lapinski & Rimal, 2005). Researchers have also shown that the three norm concepts—injunctive, descriptive and subjective—appear conceptually different from each other (Park, Klein, Smith, & Martell, 2009; Park & Smith, 2007; Rimal & Lapinski, 2015). To encourage theory extension and increased clarity, we suggest differentiating the three norm concepts to examine if each interacts with PRIA.

Another area for research refinement lies in investigating the congruency of norms to PRIA intentions and behavior. Currently, the only research we could find that studied norms and information avoidance together has examined the effects of *seeking* norms on information avoidance, rather than avoidance norms themselves (Kahlor et al., 2006; Yang & Kahlor, 2012). More work is needed, which leads to our first proposition below:

Proposition #1: There are injunctive, descriptive and subjective norms related to PRIA and each type of norm will be significantly related to PRIA intentions and PRIA.²

For example, using our earthquake case, a descriptive avoidance norm could stem from observing whether people avoid information about the risk. An injunctive avoidance norm could entail an implicit group rule that if members avoid information about the potential earthquake they will be positively judged. Finally, a subjective avoidance norm could involve perceptions that one's friends *expect* that the potential earthquake will be avoided in conversation.

Sense of community

A concept that appears to go hand in hand with norms is the strength of and attachment to the community that fosters, develops and maintains such norms. The definition of community has geographic, sociological and psychocultural roots; as a result, most researchers agree that communities contain three major elements: a territory, social exchanges, and attachments (Katz, Rice, Acord, Dasgupta, & David, 2004; Poplin, 1979). Because our model is individually based, we have chosen to focus on attachments, also referred to as psychological SOC.

SOC refers to one's sense of belonging (McMillan & Chavis, 1986). Sense of belonging is a powerful motivator to comply with or conform to perceived community norms (Poplin, 1979). For instance, if Seattlites perceive that other Seattlites expect risk information avoidance about a Cascadian earthquake, their conformity or compliance with those avoidance norms is likely to be driven by the strength of their SOC. If they have a strong SOC, they are more likely to attend to these avoidance norms, while if they have low SOC, they may be less likely to attend to avoidance norms about the earthquake. ("Motivation to comply" has been central to the TPB concept of subjective norms [Ajzen, 1991; McEachan et al., 2011; Yzer, 2013]), and examining that motivation to comply in conjunction with SOC may prove fruitful to PRIA researchers).

Norms are expressed differently at individual, group and community levels—for instance, researchers have argued that individual level norms are best measured as personal values, group norms as shared behavioral rules, and community norms as the most frequently occurring behaviors (Rimal & Lapinski, 2015; White, 1998). Differences in how norms are expressed at different levels might be related to the phenomena of pluralistic ignorance—the inability to judge social norms correctly (Cameron & Campo, 2006). For instance, someone living in Seattle might have an individual level norm to take earthquake threats seriously; this person also might misperceive that the prevailing community norm is to NOT take earthquake threats seriously. This misperception might cause the individual to feel pressure to alter his or her individual level norm to be more in line with the (mis)perceived community norm. So what does this mean for examining SOC and social norms? It suggests that SOC might relate to norms at the individual, group and community levels differently, given the norms' varying manifestations. It also means that the perceived symmetry or asymmetry between individual and group or individual and collective level norms could be a factor that is influenced by SOC. This leads to several SOC-focused propositions:

Proposition #2: There are individual, group and community-level norms to avoid information, and each type of norm-level will be significantly related to SOC.

Proposition #3: The stronger the SOC, the more effect social norms within that community will have on PRIA through conformity or compliance pressures.³

Proposition #4: There are different degrees of symmetry and asymmetry between individual and group or individual and community norms, and SOC will be significantly related to each degree of symmetry and asymmetry.

Strong SOC is often associated with positive behaviors and outcomes: for instance, a meta-analysis indicates SOC is significantly related to political participation activities, including searching for information (Talo, Mannarini, & Rochira, 2014). The disruption, or threatened disruption of a strongly attached-to place can therefore be traumatic, as the community's social or physical fabric is perceived to be under attack (Jacquet & Stedman, 2014). Researchers have shown that information avoidance occurs as a way to defend one's current knowledge from threats (Narayan et al., 2011). Researchers have also theorized that defending one's sense of place can act as a behavioral motivator (Jacquet & Stedman, 2014; Twigger-Ross & Uzzell, 1996)—perhaps as a PRIA motivator. This leads to our next proposition:

Proposition #5: The stronger the SOC, the more likely it is that PRIA will occur to protect that person's conception of their community.

Cognitive factors

Cognitive factors in the PRISM and RISP relate to how people think about risk, what they know about it and how those factors drive information seeking. Next we turn to a factor found in both the RISP and the PRISM (risk perception likelihood) and one that the literature suggests may also be relevant to PRIA (need for closure).

Risk perception likelihood

This construct refers to one's perceptions that a risk is likely to occur (Griffin et al., 1999; Kahlor, 2010; Yang et al., 2014). Risk perception itself has been extensively used in the information seeking literature, and findings have consistently shown that risk perception contributes to affective response to risk, which contributes to information seeking intentions (Eastin et al., 2015; Ho et al., 2014; Hovick et al., 2014; Willoughby & Myrick, 2016).

However, information avoidance behavior is different to seeking behavior, and we surmise that its relationship to information avoidance might be quadratic rather than linear (Haans, Pieters, & He, 2016). This might be because differing levels of risk likelihood have unequal effects on information avoidance. For instance, if I think that there is a low likelihood of an earthquake happening, I am likely to actively avoid information on the topic because I think it is extremely unlikely. Conversely, if I think that there is a high likelihood of an earthquake happening, I am likely to avoid information on the topic because I think it is extremely likely and do not want to face it. Moderate levels of risk likelihood, however, would suggest perceptions that the risk *may* occur, and so information about the risk becomes relevant but not urgent, thereby reducing avoidance levels. In this way,

risk likelihood might have an inverted quadratic relationship with information avoidance, such that:

Proposition #6: High and low levels of perceived risk likelihood will result in high levels of PRIA.

Proposition #7: Moderate levels of perceived risk likelihood will result in low levels of PRIA.

In addition to assessing the relationship of independent variables to PRIA, researchers can also begin to examine some of the interdependent relationships between variables from differing families. For example, perhaps descriptive risk information avoidance norms result in lower perceived risk likelihood than injunctive risk information avoidance norms, if descriptive norms are signaled more frequently than injunctive norms. This might signal that the risk has a low likelihood, leading to strong PRIA. This suggests our next proposition:

Proposition #8: More frequently signaled descriptive avoidance norms may yield lower levels of perceived risk likelihood, resulting in higher PRIA.

Using our earthquake scenario, this proposition suggests that more frequently signaled descriptive norms about avoiding earthquake risk information might result in lower perceptions about earthquake risk likelihood. This might cause high levels of PRIA about earthquake risks, as the risk is seen as highly unlikely.

Finally, an additional factor that might alter risk perception likelihood is cognitive load. This refers to perceiving humans as having limited capacity to process information (Kruglanski, Webster, & Klem, 1993; Lang, 2006), including perceiving information (Lang, 2006), specifically perceiving risk likelihood. Research shows that cognitive load affects selective exposure: the tendency to prefer being exposed to arguments aligned with one's position on a topic (Garrett, 2009; Jang, 2014). Recent work on avoidance in relation to selective exposure conceives of selective avoidance as aversion to opinion-challenging information (Garrett, 2009; Jang, 2014). Researchers have found that selective exposure may not occur under higher cognitive load situations and have suggested that real world contexts, with their implicit demands on cognitive load, might in fact overwhelm selective exposure (Jang, 2014). This has potential implications for PRIA—if one has a high cognitive load, perhaps it is harder to assess whether information is consistent or not with one's opinion, leading to less PRIA. Specifically, we propose:

Proposition #9: Low cognitive load will result in stronger selective exposure about risk likelihood information, which will result in higher PRIA.

Proposition #10: Medium and high cognitive load will result in less selective exposure about risk likelihood information, which will result in lower PRIA.

Using our earthquake scenario, someone with a low cognitive load might be more likely to assess earthquake risk likelihood messages, and be more likely to avoid those that are dissonant. Someone with a high cognitive load might be less likely to assess earthquake risk likelihood messages, and therefore be less likely to avoid those that are dissonant.

Need for closure

The need for closure represents a motivational continuum related to closure itself: being confident in one's topic knowledge (Kruglanski & Webster, 1996; Webster, 1993). Conditions that induce a need for closure range from the contextual to the dispositional; contextual conditions range from time pressures to difficulty processing the information, while individual conditions include prioritizing confidence (Kruglanski & Webster, 1996), as well as impression and defense goals. Impression goals pertain to desires to interpersonally fit in to social contexts, for example the desire to be socially acceptable, while defense goals pertain to desires to be self-congruent, for example the desire for self-consistency (Chaiken, Giner-Sorolla, & Chen, 1996; Griffin et al., 2012). The need for closure has been linked to uneasiness with ambiguity, a tendency to anchor on the status quo, and stereotyping (Hennes, Nam, Stern, & Jost, 2012; Retzbach, Retzbach, Maier, Otto, & Rahnke, 2013).

The RISP model concept of information sufficiency (Griffin et al., 2012) is akin to closure and has traditionally been explored in both the RISP and PRISM by detailing the gap between two factors: (a) what people perceive they know about a risk; and (b) the "information sufficiency threshold" that refers to the "(...) confidence one wants to have in one's knowledge about the risk" (Griffin et al., 1999, p. S236; see Figure 2).

RISP and PRISM studies tend to focus on insufficiency—which results from a larger gap between current knowledge and the confidence one wants about one's knowledge (Griffin et al. 1999, 2012; Kahlor, 2010). Such studies postulate the sufficiency threshold is motivated by a need for accurate information (an accuracy goal) (Griffin et al., 2012), but as both the originators of the HSM and RISP have acknowledged, there are other goals driving need for closure, such as impression or defense goals (Chaiken et al., 1996; Griffin et al., 2012). Indeed, RISP and PRISM's conceptualization of the sufficiency threshold seems to conflate confidence in one's knowledge (having reached closure) with the desire for confidence (the need for

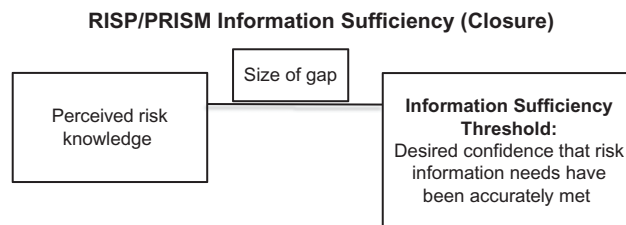


Figure 2 Original RISP and PRISM Information Sufficiency concept.

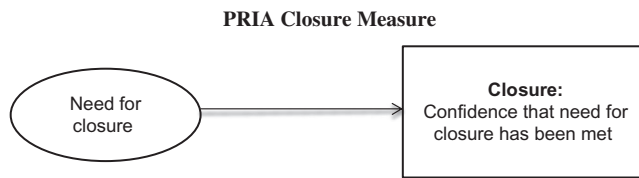


Figure 3 Information closure.

closure). To address this theoretically, we argue that the “information sufficiency threshold” (desired confidence in one’s accurate knowledge) can be delineated further when addressing PRIA. We suggest that confidence in one’s knowledge (closure) can be separated from the need for closure generally and the need for closure based on accuracy specifically (see Figure 3). This means confidence (aka: closure) is not conflated with accuracy or desire, but is a judgment based on the satisfaction of one’s need for closure. This indicates information sufficiency or insufficiency for PRIA does not need to result from an information sufficiency threshold based on desired confidence in one’s accurate information per se, but rather confidence that one’s need for closure has been met, *regardless of the types of conditions that induce the need for closure*.

While the RISP and PRISM models have successfully focused on need for closure based on accuracy goals, PRIA is a different phenomenon and as such, might be subject to different conditions that induce a need for closure. Therefore, the “PRIA Closure Measure” is a key process in our model, replacing the information sufficiency variable that is based on an implicit accuracy motivation, and found in both the RISP and PRISM (Griffin et al., 2012; Kahlor, 2010). The PRIA closure measure can be used to explore these different needs for closure. For example, research shows need for closure is related to in-group bias (Hennes et al., 2012; Shah, Kruglanski, & Thompson, 1998). Perhaps the relationship between need for closure and in-group bias (Shah et al., 1998) indicates that the impression goal is a stronger influence on need for closure and consequent closure. This leads to our next proposition:

Proposition #11: Impression goals that induce a need for closure are more likely to be related to PRIA intentions and/or PRIA than accuracy or defense goals.

For example, in our earthquake scenario, perhaps the goal to appear calm, cool and collected (an impression goal) in the face of an earthquake risk is more likely to be related to avoiding earthquake information than a goal to be consistent about one’s approaches to risks (defense goal) or to have accurate knowledge about earthquake risks. Closure here would represent a confident self-judgment that one’s impression goal has been met in relation to information about the Cascadian earthquake. The wide variety of conditions that induce a need for closure in the literature indicates that exploring which of them is strongest in relation to PRIA will prove fruitful.

Emotional Factors

The EPPM, RISP and PRISM models all feature emotion as a motivational factor in the informational behaviors they seek to explain. In the following section we explore emotion-avoidance relationships via these three models, while also reflecting on another approach to emotion research and avoidance, emotions as judgmental appraisals.

Affective risk response

The cognitive school in emotion research (which the EPPM, RISP and PRISM all subscribe to) is concerned with emotion as an “experience of mood” that is seen as part of cognitive functions (LeBlanc, McConnell, & Monteiro, 2015, p. 267). Within the cognitive school are two major research streams—dimensional and discrete (LeBlanc et al., 2015).

The dimensional approach (LeBlanc et al., 2015) is largely concerned with *emotional dimensions* such as valence or arousal; this is the approach taken by the EPPM, RISP and PRISM. Valence refers to the quality of the emotion (negative/positive) while arousal refers to the intensity of the emotion (LeBlanc et al., 2015). In the risk literature, valence is often referred to as affect (Slovic, Peters, Finucane, & MacGregor, 2005). For example, the feeling of dread that is associated with risk perceptions represents a state of negative valence (Fischhoff, Slovic, Lichtenstein, Read, & Combs, 1978; Slovic et al., 2005).

The RISP falls into this cognitive dimensional approach to emotion; indeed, Griffin et al. (1999) used dread as inspiration in theorizing about affective response to risk. In their model, negatively valenced affective responses to perceived risk hazard characteristics, often operationalized using the emotions of worry, anger and uncertainty, drive information sufficiency (Griffin et al., 1999). The PRISM continues this dimensional approach by adopting the RISP concept of affective response to risk (Kahlor, 2010). Using our earthquake example, affective risk response refers to the affective valence a person would experience when considering a potential Cascadian earthquake—whether the valence is negative, as operationalized with worry or anxiety, or positive, as operationalized with happiness or joy. Similarly, the EPPM model (Witte, 1992) also appears to be based on a cognitive dimensional approach to emotion. Witte (1992) defines fear as comprising negative valence and high arousal and argues that high threat situations lead to fear, which when coupled with efficacy perceptions, result in adaptive or maladaptive responses to the threat (such as denial of the threat) (Witte, 1992). We note that denial of the threat could reasonably manifest as PRIA.

Recent work on risk information avoidance and affective risk response using a valence perspective has shown that negative valence was negatively related to risk information avoidance—that is, the more negative valence was felt, the less one was inclined to avoid risk information (Yang & Kahlor, 2012). This work also showed that positive valence was related to risk information avoidance—the more

positive valence felt, the more one was inclined to avoid risk information (Yang & Kahlor, 2012). This suggests more work is needed in this area, and we therefore propose:

Proposition #12: Negatively valenced affective risk response will be negatively associated with PRIA.

Proposition #13: Positively valenced affective risk response will be positively associated with PRIA.

Using our earthquake example, these propositions suggest that the more positive valence felt in relation to the risk, the more PRIA, while the more negative valence felt the less PRIA.

Emotions as judgmental appraisals

We also seek to explore discrete emotions, part of the aforementioned cognitive emotional school, and commonly associated with the appraisal tendency approach (Lerner, Li, Valdesolo, & Kassam, 2015). This approach argues that each discrete emotion is associated with a specific mix of cognitive appraisals that guide judgments and coordinate responses (Lerner et al., 2015). The appraisal most relevant to our PRIA model is the “attention” attribute, which indicates whether specific emotions are associated with the tendency to attend to, avoid or ignore a stimulus (Roseman & Smith, 2001; Smith & Ellsworth, 1985). For example, Lazarus (1991) argues that the action tendency of fright and anxiety is avoidance; for sadness, it is inaction.⁴ Lazarus (1991) distinguishes between fright and anxiety based on whether the threat is concrete or uncertain, respectively. The action tendencies of fright and sadness are likely associated with information behaviors in different ways: anxiety with PRIA, and sadness with inertia. This is consistent with research that indicates a relationship between fear and individual avoidant behaviors (Janis & Feshbach, 1953; Vlaeyen & Linton, 2000).

Proposition #14: Considering emotions discretely, emotions such as anxiety and fright are more likely to lead to PRIA than other emotions because of their action tendencies towards avoidance.

Using our earthquake example, this means that messages about potential earthquake risks that evoke discrete emotions such as anxiety or fright might be more likely to induce PRIA than messages about potential earthquake risks that invoke emotions such as sadness.

Conclusion

This work provides a comprehensive “model of reality” that draws from the communication tradition of information management, as well as other research fields such as psychology and organizational behavior (McPhee & Poole, 2016). A major function of such models lies in identifying key variables that contribute to the

phenomenon. To build the model, we drew guidance from the more developed work on risk information seeking, especially the PRISM, which helped identify variables central to the study of deliberate risk information intentions and behaviors and likely to impact PRIA. From there we integrated several additional variables that match up with risk's cognitive, sociocultural and emotional foci (Slovic et al., 2004) and show promise in the context of PRIA. The propositions that we have put forward in this article suggest research directions to test these variables empirically. For example, questions that could reasonably be answered in each area include: (a) Cognitive: "Will decreasing risk perceptions result in PRIA?"; (b) Socio-cultural: "What type of social norms most strongly predict PRIA?"; and (c) Emotional: "How do discrete emotions, like anxiety, moderate risk perceptions and PRIA intentions?" Answering these sorts of questions will also begin to establish a more parsimonious model than this initial proposal. Such work will have both theoretical and applied value for researchers and practitioners. However, the proposed model is not without limitations, which we detail below.

Limitations

The focus of this model is on PRIA. To explicate the concept, we used PRISM, and its theoretical antecedents, the TPB and the RISP model to inform our modeling. Both the TPB and the PRISM conceive of behavior as planned, meaning that they see information behaviors as deliberate and conscious through the intention and behavior relationship. However, given critiques in the literature about the relationship between intentions and behavior, our model also provides for direct relationships with other variables that are likely to impact PRIA behaviors in conscious and unconscious ways. There is less attention paid to unconscious factors in our model, and we acknowledge that could be a limitation of this work. For example, one such factor is motivated reasoning. This refers to "(...) an unconscious tendency (...) to selectively credit and dismiss factual information in patterns that promote some goal or interest" (Kahan, 2017, p. 1; see also Kahan, 2013). We hope that researchers will begin to examine unconscious factors to extend the nascent PRIA model that we have put forward here.

Another limitation of this model pertains to its breadth. However, we felt an approach that embraced cognitive, sociocultural and emotional variables was necessary for two major reasons. First, there is a lack of cohesion in the information avoidance literature writ large, and as a first attempt at modeling this area from a risk perspective, it was essential to consider the wide variety of factors that have been researched. Second, conceptions of risk phenomena include cognitive, socio-cultural and emotional elemental families (Slovic et al., 2004). Consequently, we decided to adopt this approach with PRIA as well. As a result, we acknowledge that our proposed model is broad, but we also expect that a leaner model will evolve through empirical testing over time (McPhee & Poole, 2016).

Next steps

The development of a “pre-theoretical conceptual representation” of a phenomenon, as we have done here, can be used to elaborate theory, integrate research fields and test variable relationships (McPhee & Poole, 2016, p. 1271). Constructing models can remind researchers of factors that should be added to investigations, as well as factors that have been misrepresented in the literature (McPhee & Poole, 2016). By examining overlooked factors that might pertain to PRIA, such as SOC, and by detailing the original definitions of variables, such as closure, we hope that researchers will be able to use these variables to advance and elaborate theories of PRIA. One other such overlooked factor that may be pertinent to PRIA is the TPB’s concept of behavioral beliefs (Ajzen, 1991; Griffin et al., 2012). This factor represents beliefs about the prospective consequences of behaviors (Ajzen & Sheikh, 2013), and could be used for instance, in conjoint analysis to advance our understanding of PRIA tradeoff decision making.

Another purpose of this model is to facilitate communication across research fields (McPhee & Poole, 2016). Results from tests of this model’s propositions will not only advance risk communication research, but also will allow an extension and application of these findings into other related communication areas, such as public relations and advertising, mass communication, and organizational communication. For instance, a better understanding of the conditions under which PRIA occurs could help public relations and advertising scholars to explore campaign design or evaluation research that responds to avoidant audiences in meaningful ways. Additionally, researchers in other fields, such as psychologists working on other avoidance behaviors such as dieting or alcohol avoidance, might inform our understanding of PRIA intentions and behaviors.

Finally, what this proposed theoretical model lacks in parsimony, it makes up for it in its breadth and reach across areas of inquiry, and can therefore be used to test under-researched variable relationships (McPhee & Poole, 2016). This provides researchers the opportunity to examine the relationships between areas previously uninvestigated. This might involve researchers examining the relationship between social norms and negative emotions, or perceived risk likelihood and SOC in relation to PRIA. It could also involve examination of risk communication factors that we have not investigated in depth here, but might be fruitful for further exploration with the model variables, such as channel beliefs (Griffin et al., 2012) or risk level motivations (Liao, Yuan, & McComas, 2016). This area is rich for inquiry, and we have provided an initial map for exploration and refinement. In summary, we are hopeful the PRIA model will assist researchers in information management and associated fields to begin this important work.

Notes

- 1 Of note, the RISP included information avoidance. Information avoidance in the RISP is one of the least studied aspects of that model, although notable exceptions include

Dunwoody and Griffin, 2015; Fung, Griffin, and Dunwoody, 2018; and Kahlor, Dunwoody, Griffin, and Neuwirth, 2006.

- 2 After exploratory research establishes whether such significant relationships in fact exist, further investigations can examine these relationships for strength and direction.
- 3 See footnote two in relation to propositions 2 and 4.
- 4 It is important to note that the dimensional and appraisal schools of thought are examining different conceptions of emotions, which is why some of the findings between these schools may appear contradictory. The mechanisms behind these two schools of thought—arousal and valence on the dimensional side, and discrete emotional types on the discrete side, conceive of emotions in fundamentally different fashions, leading to findings that are not necessarily in tandem with each other.

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