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It's Not What You Say, It's the Way You Say It!

Effective message styles for promoting innovative new services

Kerrie Bertele^{a,*}

Stephanie Feiereisen^b

Chris Storey^c

Tom van Laer^d

^agravity GmbH, Steinerstraße 15, 81369 München

^bMontpellier Business School, 2300 Avenue des Moulins,
34080 Montpellier, France.

^cUniversity of Sussex
Falmer, Brighton, BN1 9RH, UK

^dThe University of Sydney,
NSW 2006 Australia

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Abstract

While innovations are critical to firms' long-term survival, they have a high failure rate. Identifying the factors that encourage consumer adoption of innovations is therefore essential for the successful management of new products and services. While prior research suggests that two message styles (i.e., metaphors and narratives) can help convey the benefits of new services, extant scholarly work has not examined which style increases adoption intentions to a greater extent. Study 1 demonstrates that metaphors enhance adoption intentions more than narratives for incrementally new services (INSs) but not for really new services (RNSs). Study 2 shows that low-figurativeness metaphors enhance adoption intentions more than high-figurativeness metaphors for INSs but not for RNSs and that consumers' negative cognitive responses underlie this effect. These findings have important implications for theory and practice.

Keywords: Metaphors, Narratives, Figurativeness, Adoption intentions, New services

1. Introduction

Although innovation is critical to firms' long-term survival, research shows that most innovations fail from consumers' resistance (Heidenreich & Kraemer, 2016) stemming from their uncertainties about the benefits of innovations and their reluctance to learn about them (Hoeffler, 2003). Identifying the factors that enhance consumer adoption intentions toward innovations is therefore critical to the successful management of new products and services (Ma, Gill, & Jiang, 2015). One of these factors is the style of the message used in communications about the innovation. Message style is the method or manner in which content is expressed (Phillips & McQuarrie, 2002). Different terms in the literature refer to the method or manner in which content is expressed. For example, Feiereisen, Wong, and Broderick (2013) use the term "framing strategies" to explore the effects of analogies and mental simulations on consumers' comprehension and attitudes toward innovations. Hoeffler (2003) examines analogies and mental simulations as part of a measurement preference exercise and employs the term "learning strategies."

In this research, we are interested in the effect of two distinct message styles (i.e., metaphor and narrative) on consumers' adoption intentions toward innovative new services. A metaphor is a type of rhetorical figure, which refers to "an artful deviation in the form taken by a statement" (McQuarrie & Mick, 1996, p. 424). The rhetorical figure of metaphor specifically juxtaposes two concepts and asks consumers "to compare the two concepts or objects and infer what they have in common" (Kim, Baek, & Choi, 2012, p. 77). As such, metaphors rely on cross-domain comparisons (Lakoff & Johnson, 1999; Phillips & McQuarrie, 2009). For example, consider the following headline in an advertisement for a vacation: "Our resort in Jamaica will fly you to the moon" (Gilliam & Rockwell, 2018). From this metaphor, message recipients may infer that the

resort is an unforgettable and once-in-a-lifetime experience. Metaphors are “fundamental to learning and communication” (Lee, McGoldrick, Keeling, & Doherty, 2003, p. 342) and feature prominently in modern advertising (Chang & Yen, 2013; Phillips, 2003). By contrast, a narrative is an account of an event or a sequence of events leading to a transition from an initial state to a later state or outcome involving consumers (Van Laer, de Ruyter, Visconti, & Wetzels, 2014). Narrative advertisements have a story as a foundation and include characters, a setting, a plot, and a time frame (Boller, 1988). Metaphors and narratives differ in how they affect consumer information processing but share notable powers of sense-making and processor engagement (Gilliam & Rockwell, 2018). Indeed, prior work indicates that narratives (Escalas, 2007; Shen, Sheer, & Li, 2015; Van Laer et al., 2014) and metaphors (Ang & Lim, 2006; Kim et al., 2012; Tom & Eves, 1999) can persuade consumers.

While research recognizes the need to compare different ways to express a message (e.g., mental simulation vs. analogy) in the context of innovative new products (Feiereisen, Wong, & Broderick, 2008), prior work has not investigated the relative effects of metaphors and narratives for new services. Comparing the effectiveness of metaphors and narratives in communicating the benefits of new services is important because both message styles seem well-suited to the promotion of new services and hold the potential to increase adoption intentions toward such services. In light of low adoption rates for innovations, providing managers with guidance on which of these two message styles can best communicate the benefits of new services is therefore essential. Metaphors might be well-suited to the promotion of new services because they hold the potential to make abstract offerings (e.g., intangible services) more concrete. Indeed, associating a service with an extrinsic object or concept has long been suggested as one method of making the service appear more tangible. Such associations can reduce consumers’ perceptions of risk (Berry

& Clark, 1986). Narrative messages might also be uniquely suited to communicating services because the consumption of a service can serve as an experience (Padgett & Allen, 1997) and narratives can be particularly effective in portraying and conveying experiences (Boller, 1988). The first contribution of our work is to examine the role of these two important message styles (i.e., metaphors and narratives) in enhancing consumers' adoption intentions toward innovative new services, by building on the structure-mapping theory of analogical reasoning (Gentner, 1983; Gentner & Holyoak, 1997), research on the "pleasure of the text" (Barthes, 1985), and experimental aesthetics (Berlyne, 1971).

In addition, we build on the resource-matching perspective to understand how a metaphor's figurativeness affects adoption intentions. The resource-matching perspective argues that message persuasiveness is enhanced by matching the resources allocated to processing to the resources demanded by the task (Anand & Sternthal, 1989). Metaphor figurativeness is the extent to which a metaphor artfully deviates from people's expectations (McQuarrie & Mick, 1996). The higher the figurativeness of a metaphor, the greater is the degree of irregularity in the message, and the more the recipient needs to cognitively elaborate to process it. Because less figurative metaphors are easier to understand than more figurative metaphors, we expect less figurative metaphors to be more effective in enhancing adoption intentions toward new services. This is also consistent with prior literature on processing fluency (Schwarz, 2004). Therefore, a second contribution of our work is to show how adoption intentions change when the figurativeness of the metaphor employed to communicate the benefits of the new service is low rather than high.

Practitioners often employ metaphors and narratives to convey the benefits of both incrementally new services (INSS) and really new services (RNSs). For example, in one advertisement Hello Fresh (an INS whose mission is to change the way consumers purchase and

prepare food) employs a narrative depicting a couple in which one partner suffers from multiple sclerosis. The story illustrates how Hello Fresh has transformed their evenings, making food preparation simple, convenience and exciting. Food Ink, an RNS offering a three-dimensional dining experience, employs the metaphor “Taste Tomorrow Today,” suggesting a futuristic experience. Despite the frequent use of both metaphors and narratives, prior work shows that communication strategies for innovations with distinct levels of newness should differ. Specifically, Dahl and Hoeffler (2004) demonstrate that for incrementally new products (i.e., products that build on established products), the use of self-related visualization content leads to higher evaluations, while for really new products (i.e., innovative products that define a new product category) the use of other-related content facilitates higher evaluations. Zhao, Hoeffler, and Dahl (2009) show that imagination-focused visualization leads to higher evaluations for really new products but has no effect on the evaluation of incrementally new products. However, it remains unclear whether service newness affects adoption intentions when comparing the effectiveness of (1) metaphors versus narratives and (2) metaphors that are low versus high in figurativeness. A third contribution of our work is to demonstrate that service newness moderates the relationship between these styles used in launch messages for new services and adoption intentions.

Another question involves the mental processes that mediate the potential effects of metaphor figurativeness (low vs. high) on new service adoption intentions. Drawing on the cognitive response tradition (Wright 1973, 1980), we identify negative cognitive responses as a mediator. Wright (1973) argues that spontaneous cognitive responses reflect the psychological processes underlying persuasion and that negative cognitive responses, such as the number of counterarguments, are often the strongest predictor of message acceptance. Evidence in related

work (McQuarrie & Mick, 1992) suggests that the need for extensive thinking associated with a highly figurative rhetorical figure may be met with negative responses if receivers are unable to successfully decode the meaning of the message. However, it remains unclear whether metaphors with distinct levels of figurativeness (low vs. high) have a different capacity to trigger negative cognitive responses and whether negative cognitive responses decrease adoption intentions. A fourth contribution of our work is to demonstrate that negative cognitive responses mediate the effect of metaphor figurativeness on consumers' adoption intentions when the service is an INS.

This article is structured as follows: we first elucidate the theoretical development of the hypotheses, along with the hypotheses themselves. We then proceed to empirically test these hypotheses in two experimental studies. Last, we discuss the theoretical contributions and managerial implications, provide limitations, and offer directions for future research.

2. Literature review and hypotheses

2.1. Conceptual background

Our premise is that the manner in which content is expressed affects adoption intentions toward new services. Before 1996, message argument quality (e.g., Petty & Cacioppo, 1986) dominated persuasion research. In a foundation-laying article, McQuarrie and Mick (1996) developed a taxonomy of rhetorical figures in advertising language and placed the importance of metaphors for the persuasion process on the research agenda. Green and Brock (2000) later demonstrated that narratives affect consumer evaluations differently than non-narrative messages.

Metaphors appear frequently in advertising, and the popularity of these rhetorical figures seems justified. Indeed, Tom and Eves (1999) compare promotional messages that use rhetorical figures with messages that do not and show that messages with rhetorical figures are better

remembered and more convincing. Individuals processing metaphors receive compensation for their extra cognitive effort in the form of pleasure (McQuarrie & Mick, 1996), derived from successfully resolving the ambiguity inherent in the metaphor (Berlyne, 1971). Metaphors trigger additional elaboration beyond what non-figurative messages require to decode them (Hoeken, Swanepoel, Saal, & Jansen, 2009; Kim et al., 2012). Elaboration, which entails central route processing, can lead to lasting attitude formation (Petty & Cacioppo, 1986). However, metaphors are effective when they deviate from expectations only if consumers are able to understand them (McQuarrie & Mick, 1996, 1999). Overall, extant research shows that metaphors are powerful tools of persuasion, as long as they are comprehensible.

Metaphors act as prefabricated building blocks of mental imagery (Gilliam & Rockwell, 2018) and therefore might be uniquely suited to convey information for innovations. When faced with an innovative new offering, consumers' visualizations might be biased or wrong because of their lack of experience with the imperatives of the innovation. This is consistent with prior work that states that the main function of imagery is to allow individuals to generate predictions based on their past experiences (Kosslyn & Moulton, 2009). When confronted with the task of evaluating an innovation, consumers might lack the implicit memories required for sense-making and constructing appropriate mental images. Metaphors can overcome this problem by accessing existing and relevant mental imagery to build the newly created visualization rapidly and accurately (Gilliam & Rockwell, 2018). Individuals' mental imagery is intimately linked with their responses and behaviors (Kosslyn & Moulton, 2009), as it stimulates "episodic future thought" (Szpunar & McDermott, 2009, p. 119) in which they visualize future events. This suggests that individuals employ the imagery from metaphors not only to comprehend the attributes of a service but also to simulate its use (Gilliam & Rockwell, 2018). Thus, metaphors might be highly effective

in conveying the benefits of innovations because of their ability to generate mental imagery and simulate use, even when consumers lack experience with the innovation.

Narratives are also a powerful way to convey a message. Sometimes referred to as stories (Van Laer et al., 2014), narratives are characterized by an anecdote in which usually one and sometimes more than one person is staged to illustrate certain consequences of a behavior. Narratives are widely used in journalistic (Daschmann, 2008) and promotional (Zillmann, 2006) messages. Previous research demonstrates that narratives can persuade consumers (Escalas, 2007; Shen et al., 2015; Van Laer et al., 2014). More recent work indicates that narrativity also markedly affects consumer persuasion in the context of online reviews. Specifically, as the narrative-related textual elements that contribute to a review's narrativity increase, the persuasiveness of the review increases (Van Laer, Escalas, Ludwig, & Van den Hende, 2019). In addition, Van Laer et al. (2014) meta-analyzed 76 articles for which 21,208 participants read narratives under different conditions. They measured the extent to which these narratives persuaded the participants and prompted narrative transportation. Narrative transportation is a convergent process in which all mental systems and resources are devoted to the events occurring in the narrative (Green & Brock, 2000). This concept is similar to the idea of getting "lost" in a story (Nell, 1988). The meta-analysis showed that narrative transportation is the main factor explaining the persuasiveness of a narrative.

However, when consumers lack the cognitive resources to mentally simulate a narrative, their transportation into the world of the story can be hindered, reducing the effectiveness of the narrative (Chang, 2009). In sum, narratives can be a powerful persuasion tool; however, their effectiveness hinges on consumers' cognitive capacity. In situations in which a consumer's cognitive capacity is limited, the greater effectiveness of narrative messages over non-narrative messages (i.e., messages based on arguments) will be attenuated (Chang, 2009). This is

particularly relevant for the current research, which examines consumer responses to innovative services, a context in which the difficulty associated with processing novel service benefits often limits consumers' cognitive capacity.

2.2. Effect of metaphors and narratives on adoption intentions toward INSs and RNSs

A key characteristic of service innovations is their degree of newness. Prior work distinguishes innovations that are really new from those that are incrementally new (Hoeffler, 2003). RNSs offer entirely novel benefits not available from existing services, whereas INSs are a refinement of existing services and offer only incremental benefits (Hoeffler, 2003; Ma et al., 2015). While research illustrates the power of narrative appeals over appeals based on lists of service attributes in enhancing consumers' affective responses to ads for unfamiliar services (Mattila, 2000), we propose that metaphors will have a differential advantage over narratives for INSs. We argue that adoption intentions toward INSs will be enhanced when the appeal is a metaphor rather than a narrative because rhetorical figures such as metaphors provoke what the semiotician Barthes (1985) calls the "pleasure of the text," or the reward consumers obtain from processing a smart arrangement of signs. This is also in line with Berlyne's (1971) research in experimental aesthetics, which states that incongruity (or deviation) can evoke a pleasurable degree of arousal. Thus, we expect that metaphors will increase adoption intentions toward INSs to a greater extent than narratives because of the increased pleasure and arousal they trigger.

Furthermore, "metaphors are predominantly relational comparisons, and are thus essentially analogies" (Gentner, 1983, p. 162). Therefore, the structure-mapping theory of analogical reasoning (Gentner, 1983; Gentner & Holyoak, 1997) is relevant to our understanding of metaphorical processing. This theory states that an analogy (and, by extension, a metaphor) requires message recipients to map knowledge from one domain (the base) onto another (the

target). The main goal of this theory is to identify and transfer commonalities in the way objects in a domain relate to each other. Thus, when mapping takes place, objects from the base domain map onto objects from the target domain because of these objects' role in the matching relational structure, not because of a physical resemblance. For example, as Gregan-Paxton, Hibbard, Brunel, and Azar (2002) note, a secretary and a PDA (personal digital assistant) do not have any physical similarities; however, they have the same role in the common relational structure linking the secretary to the PDA (i.e., both the secretary and the PDA perform a variety of tasks, such as scheduling meetings).

In addition, a key insight emerging from research guided by the structure-mapping theory is that analogical mapping leads to increased elaboration of the information included in the common relational structure linking the base and the target domains (Gentner & Markman, 1997). Specifically, structure mapping enhances the salience of objects in the target domain that correspond to objects that occupy a similar role in the base domain. This might be particularly fruitful for innovative services, which often require more learning than regular services: instead of focusing on the challenges, consumers may allocate their cognitive resources to processing attributes of the target that correspond to attributes in the base. Thus, structure-mapping theory also supports the appropriateness of metaphors to convey the benefits of INSs. Therefore, we predict that for INSs, communicating the service using a metaphor will result in higher adoption intentions than communicating it using a narrative.

As noted previously, metaphors are powerful tools of persuasion, as long as individuals can understand them. When a metaphor is used to convey the benefits of an INS, consumers should have the cognitive resource capacity to engage in the elaboration required to solve the metaphor. As such, they should be able to successfully decipher the metaphor, leading to positive affect.

However, when a metaphor is used to convey the benefits of an RNS, we expect that the effectiveness of the metaphor in increasing adoption intentions will be undermined. This is because of the higher uncertainty surrounding the benefits of RNSs (Hoeffler, 2003) and consumers' difficulty in successfully deciphering a metaphor for a highly novel innovation. Anand and Sternthal (1989) provide a theoretical rationale for this effect: the resource-matching perspective. Specifically, processing is optimized when message recipients' available cognitive resources match the resource demands placed by the stimulus. If the resource demands of a stimulus are greater than recipients' available resources, they may be overwhelmed, and a detrimental effect on processing will occur. We argue that when an RNS uses a metaphor, the resource demands introduced by the metaphor will be greater than recipients' available resources because of the newness of the service offering and consumers' lack of existing knowledge structures that can be used to make judgments about the innovation.

This expectation is consistent with the view of humans as "cognitive misers," applying frugality in the use of their limited cognitive resources and naturally conserving them, due to the volume and intensity of stimuli they face (Fiske & Taylor, 1991). The resources available to process an advertisement are dependent on consumers' cognitive capacity at a given time, while the resources allocated to processing are the minimum required by the task. Thus, when a stimulus uses a metaphor to depict an innovation whose benefits are highly novel (i.e., an RNS), the resource demands placed by the stimulus will likely be greater than the cognitive resources the consumer dedicates to decipher the metaphor. Therefore, when a metaphor is used to convey the benefits of an RNS, we expect that the effectiveness of the metaphor in increasing adoption intentions will be undermined, in line with the resource-matching perspective.

A complementary explanation comes from metaphors' cross-domain comparison properties (Lakoff & Johnson, 1999), which require message recipients to infer commonalities between domains. For example, an ad employs a metaphor when it states that exercise will "lay the foundation for lasting fitness," inviting consumers to compare exercise routines to house foundations to infer what the two domains, or concepts, have in common (Phillips & McQuarrie, 2009). Individuals learning about an RNS through a metaphor need to map the elements of the metaphor (base domain) onto the known elements of the RNS (target domain). This requires identifying the relational commonalities between the base and the target, in line with work on structure mapping (Gentner & Markman, 1997). Prior work shows that errors may occur during the mapping process (Gentner & Toupin, 1986; Ortony, 1975). Hoeffler (2003) notes that errors may be more likely to occur when innovations provide truly novel benefits. Therefore, we expect that mapping errors will be more likely to occur when services provide truly novel benefits, because message recipients will be unfamiliar with the target (i.e., the RNS). By contrast, when a metaphor is used to convey the benefits of an INS, individuals' experience with the service category should make it easier for them to map the elements of the service onto the known elements of the base domain.

Similarly, consumers' lack of existing cognitive knowledge structures for RNSs can also make it challenging to mentally simulate narratives about such novel services, preventing them from being fully transported into the world of the story. Chang (2009) illustrates that the effectiveness of narratives depends on the availability of sufficient cognitive resources. Specifically, when cognitive capacity is constrained, narratives are less likely to transport and "hook" (a concept Escalas, Moore, and Britton [2004] introduce to describe the degree of experiential involvement that occurs when an individual reads a narrative) readers or to evoke

empathy. We expect that consumers' cognitive capacity will be constrained when they process RNSs, due to the large learning burden to understand these innovations' highly novel benefits (Lehmann, 1994). Thus, we predict that for RNSs, message style (metaphor vs. narrative) will not differentially affect adoption intentions, as consumers' cognitive resources face a higher demand than when processing an INS, leaving insufficient resources to either successfully process the metaphor or be fully transported into a narrative. Given this discussion, we hypothesize the following:

H1. Service newness moderates the effect of message style (metaphor vs. narrative) on consumers' adoption intentions: (a) for INSs, communicating the service using a metaphor results in significantly higher adoption intentions than communicating it using a narrative, while (b) for RNSs, there is no significant difference in adoption intentions between using a metaphor and using a narrative.

2.3. Effect of metaphor figurativeness on adoption intentions toward INSs and RNSs

The impact of rhetorical figures such as metaphors in advertising can be largely attributed to their artful deviance, or figurativeness, which stems from their incongruity and leads to positive persuasive outcomes (Berlyne, 1971). However, as outlined previously, the resource-matching perspective (Anand & Sternthal, 1989) states that persuasion attempts are likely to be more successful when the processing demands placed on the message receiver match the cognitive resources available. Specifically, the incongruity associated with metaphors might not always lead to positive outcomes, as the positive effects of incongruity rely on its successful resolution by means of metaphoric comprehension (Phillips, 2003). When a metaphor is highly figurative and, therefore, highly incongruous, the cognitive demand placed on the recipient is higher than under a

less figurative metaphor. Recipients might thus be unable to fill in the gap and interpret the highly figurative metaphor correctly.

In addition, processing fluency captures the experienced ease of processing a stimulus (Schwarz, 2004). Extant work shows that less conventional metaphors, which are less familiar to message recipients, take significantly longer to understand than conventional metaphors (Blank, 1988; Gentner & Wolff, 1997) and therefore may have reduced processing fluency. Prior literature suggests that a decrease in processing fluency decreases liking of the stimulus and negatively affects evaluative judgments (Lee & Labroo, 2004; Reber, Winkielman, & Schwarz, 1998). As a result, we expect that highly figurative metaphors will have lower processing fluency than less figurative metaphors, will be overly challenging to decipher, and will affect evaluations more negatively.

In addition, as discussed previously, metaphors are predominantly relational comparisons and thus are essentially analogies (Gentner, 1983). Therefore, the structure-mapping theory of analogical reasoning (Gentner, 1983; Gentner & Holyoak, 1997) is relevant to our theorization. We expect that successfully transferring relational commonalities between the base and target domains will be more challenging when the metaphor is highly figurative, as highly figurative metaphors are more irregular and require greater cognitive elaboration to solve. Thus, consistent with prior work showing that metaphors are only effective when they are comprehensible (McQuarrie & Mick, 1999) and that counter-productive outcomes may emerge when advertisers run ads that risk overwhelming message recipients' available resources (Peracchio & Meyers-Levy, 1997), we expect that highly figurative metaphors will be less effective in enhancing adoption intentions than metaphors that convey a more certain meaning (i.e., less figurative metaphors) for the promotion of INs.

Conversely, for RNSs, we expect no significant difference in adoption intentions between using a metaphor low in figurativeness and using a metaphor high in figurativeness (i.e., service newness will moderate the effect of metaphor figurativeness on adoption intentions). As discussed previously, processing the benefits of highly novel innovations places high resource demands on consumers because of their lack of pre-existing knowledge structures for such innovations (Gregan-Paxton et al., 2002; Ziamou, 1999) and because of the uncertainty surrounding these innovations' benefits (Castaño, Sujan, Kacker, & Sujan, 2008; Hoeffler, 2003). To develop positive adoption intentions toward an RNS, consumers need to undergo a three-step process (Hoeffler, 2003): (1) learning about the service, which is more demanding for RNSs than INSs; (2) understanding the service benefits; and (3) estimating the personal usefulness of the new benefits, which should lead to the development of positive adoption intentions provided that the benefits are understood and deemed personally relevant. Overall, RNSs are more challenging to process than INSs.

When a metaphor is used to communicate the benefits of an RNS, consumers may experience difficulty in progressing through these three steps. This is because of the cognitive demands associated with both resolving the incongruity of the metaphor (Phillips & McQuarrie, 2009) and processing the benefits of a highly novel innovation (Veryzer, 1998). Such difficulty is likely to occur regardless of the level of figurativeness of the metaphor, because the cognitive demands metaphors place on consumers may be overly high when used to communicate the benefits of RNSs. This is in line with extant work showing that really new innovations place a large learning burden on consumers (Lehmann, 1994). Such a predicament may be particularly pertinent for the processing of highly novel services because services' intangible nature makes

them more challenging to appraise than products (Zeithaml, 1981), leading to higher levels of uncertainty. Thus, we hypothesize the following:

H2. Service newness moderates the effect of metaphor figurativeness (low vs. high) on consumers' adoption intentions: (a) for INSs, communicating the service using a metaphor low in figurativeness results in significantly higher adoption intentions than communicating it using a metaphor high in figurativeness, while (b) for RNSs, there is no significant difference in adoption intentions between using a metaphor low in figurativeness and using a metaphor high in figurativeness.

A possible process explanation for the effect proposed in H2a is that it works through negative cognitive responses. Prior research suggests that cognitive responses (i.e., the thoughts evoked by persuasive messages) are important determinants of attitude change (Chattopadhyay & Alba, 1988; Greenwald, 1968; Petty & Cacioppo, 1986). According to the cognitive response tradition (Wright, 1973), spontaneous cognitive responses reflect the psychological processes associated with persuasion, and negative cognitive responses are often the strongest predictor of message acceptance or rejection.

In line with the resource-matching perspective (Anand & Sternthal, 1989), message recipients may find processing highly figurative metaphors challenging, because the cognitive demands of such metaphors may be greater than the cognitive resources available. Indeed, the positive impact of metaphors on consumer response is contingent on consumers' ability to successfully process the metaphor (McQuarrie & Mick, 1996). Metaphors that are too deviant and, therefore, too difficult to decipher will fail to give pleasure: "There is no pleasure if the text lacks art; but pleasure comes from the successful resolution of incongruity, and the amount of

incongruity, and hence the degree of resolution possible is a function of the extent of deviation” (McQuarrie & Mick, 1999, p. 40).

In addition, advertisements that contain metaphors are examples of open advertisements (Ketelaar, Van Gisbergen, Bosman, & Beentjes, 2008), defined as ads that do not guide consumers toward a specific interpretation and require more effort to comprehend than traditional ads. According to Ketelaar, Van Gisbergen, Bosman, and Beentjes (2010, p. 72), if consumers are confronted with a metaphor that is difficult to understand, “they might become irritated because they do not want to spend time or energy creating an interpretation.” The authors also argue that “consumers who are unable to create an interpretation after some decoding effort may develop a negative attitude toward the ad, because of feelings of frustration or irritation” (p. 73). Indeed, they find that openness has an overall negative effect on attitude toward the ad, brand beliefs, and attitude toward the brand. They relate the negative effect of openness to the difficulty consumers experience in searching for an interpretation. Thus, the literature on open ads also supports the argument that metaphors high in figurativeness, which are more difficult to decipher, are likely to elicit more negative cognitive responses than metaphors low in figurativeness.

Indeed, as discussed previously, humans are cognitive misers reluctant to engage in extensive cognitive thinking (Fiske & Taylor, 1991). Thus, the need for extensive thinking associated with a highly figurative metaphor is likely to be met with negative cognitive responses because receivers are unable to successfully resolve the incongruity. This is consistent with McQuarrie and Mick’s (1992) finding that a rhetorical figure can be so deviant as to have a negative impact, triggering confusion rather than interest. In turn, negative cognitive responses are likely to decrease adoption intentions, in line with persuasion research demonstrating that

increased negatively valenced cognitive responses reduce persuasion (Festinger & Maccoby, 1964; Pfeiffer, Deval, Kardes, Hirt, Karpen, & Fennis, 2014). Thus, we predict the following:

H3. For INSs, negative cognitive responses mediate the effect of metaphor figurativeness on consumers' adoption intentions.

3. Study 1

Study 1 examines the impacts of message style (narrative vs. metaphor) and service newness (INS vs. RNS) on adoption intentions. We deliberately undertook extensive pre-testing out of concerns with manipulation check interpretation (Herr, Page, Pfeiffer, & Davis, 2012).

3.1. Pre-tests

3.1.1. Pre-test 1: service selection

The aim of pre-test 1 was to identify an INS and an RNS for use in the main experiment that differed in their service newness but were equivalent in attractiveness. We identified six services sourced from websites about global service innovations (e.g., Springwise.com): a driverless taxi service, an innovative laundry service, a gaming rental service with motion sensor technology, a travel agency using oculus rift technology to offer surrogate vacation experiences, a three-dimensional printing food experience, and an intelligent financial service helping individuals manage their finances. For each service, we manipulated the service offering to be either an INS or an RNS by modifying one feature in each service. This helped maximize standardization between the INS and RNS version of each service, in line with the work of Kronrod and Danziger (2013). The pre-test therefore had 12 conditions. We conducted this pre-test on Amazon Mechanical Turk (MTurk), a frequently used source of participants for experimental research (Yu, Hudders, & Cauberghe, 2018). We randomly presented one of the 12 service descriptions to a panel of U.S. participants, followed by a questionnaire. Each participant was exposed to one

service description. We included an instructional manipulation check within the questionnaire to verify whether participants were paying attention to the instructions (Oppenheimer, Meyvis, & Davidenko, 2009). We randomly assigned each participant to one of the experimental conditions. We included the instructional manipulation check mid-way through the questionnaire. We removed participants who failed this check after the data collection was complete and the data were cleaned (Hazée, Van Vaerenbergh, & Armirotto, 2017). Removal of 18 people who failed the instructional manipulation check resulted in a sample of 494 participants. Cell sizes ranged from 36 to 46 participants.

We report the alpha values for all multi-item scales herein. These values refer to the results from the reliability tests we conducted using the available data. First, we checked the manipulation of the independent variable service newness (INS vs. RNS) by asking participants to rate the INS or RNS description on three newness-related adjectives (innovativeness/novelty/originality; 1 = not at all, 7 = extremely; adapted from Zhao et al., 2009). Second, we averaged these ratings into a single scale ($\alpha = .87$); this measure served to ensure that the services differed significantly in terms of their perceived newness, with both being above average on newness (though the RNS was perceived as significantly higher on the newness scale). We also asked participants to rate the attractiveness of the service using three items (likable/attractive/interesting; 1 = not at all, 7 = extremely; adapted from Kahle & Homer, 1985). We averaged these items into a single scale ($\alpha = .95$). We used this attractiveness measure to ensure that the services did not significantly differ in terms of attractiveness, and therefore we removed the potential confounding impact of service attractiveness.

The results indicated that the innovative video game rental service “Ultimate Gaming Rentals” satisfied our aims in terms of successfully manipulating an INS versus RNS version of

the service on the basis of the newness measure. This fictitious brand is based on a real service, in line with Ma et al. (2015), who developed a fictitious brand from a real product. The INS for Ultimate Gaming Rentals offers a motion sensor feature for gamers, while the RNS offers mind control power. Participants perceived the INS as significantly less new than the RNS ($M_{INS} = 5.33$ vs. $M_{RNS} = 6.32$, $p < .01$). As expected, we found no significant difference in the attractiveness of the INS versus the RNS ($M_{INS} = 4.9$ vs. $M_{RNS} = 5.36$, $p > .10$).

3.1.2. Pre-test 2: development of the metaphor stimuli

The aim of pre-test 2 was to identify a metaphor for the INS (Ultimate Gaming Rentals: a modern gaming service with a motion sensor feature) and one for the RNS (Ultimate Gaming Rentals: a modern gaming service with a mind control feature). This pre-test aimed to ensure that the characteristics of the metaphor used for both the INS and the RNS were equivalent, specifically in terms of metaphor figurativeness, attitude toward the base domain of the metaphor, metaphor comprehension, and familiarity with the base domain. We scoured online blogs, websites, and social media sites for metaphorical descriptions of similar services and tested three metaphors for the INS (“your hand becomes a magic wand,” “be Tom Cruise in *Minority Report*,” and “superpowers in your own hands”) and three for the RNS (“become a *Star Wars* Jedi,” “gain paranormal powers,” and “join the world of science fiction”). We randomly presented one of the six metaphors to a panel of 256 U.S. participants, followed by a questionnaire. Cell sizes ranged from 39 to 44 participants. We measured the level of metaphor figurativeness by asking participants to rate the service description according to one 7-point differential item (artful/clever and straightforward/matter-of-fact; Gkiouzepas & Hogg, 2011; Phillips & McQuarrie, 2009). We asked participants to indicate how familiar they were with the base domain of the metaphor (1 = not at all familiar, 7 = extremely familiar). We then measured comprehension of the comparison

between the base and target (i.e., the new service) domains with a 7-point single-item scale (1 = not easy at all, 7 = extremely easy; adapted from Hoeffler, 2003). We assessed attitude toward the base domain with three 7-point differential items (unfavorable/favorable, unpleasant/pleasant, and unappealing/appealing; 1 = strongly disagree, 7 = strongly agree; adapted from MacKenzie & Lutz, 1989; Schroll, Schnurr, & Grewal, 2018). We averaged these ratings into a single scale ($\alpha = .91$). Two metaphors met our criteria: “gain paranormal powers” for the RNS and “be Tom Cruise in *Minority Report*” for the INS (see Online Appendices A1 and A2). We found no significant differences in the level of figurativeness ($M_{RNS} = 5.62$ v. $M_{INS} = 5.15$, $p > .10$), familiarity with the base domain ($M_{INS} = 3.45$ v. $M_{RNS} = 3.77$, $p > .10$), comprehension of the metaphor ($M_{INS} = 4.27$ v. $M_{RNS} = 4.51$, $p > .10$), or attitude toward the base domain ($M_{INS} = 5.10$ v. $M_{RNS} = 5.02$, $p > .10$).

3.1.3. Pre-test 3: development of the narrative stimuli

We then developed the narrative stimuli for the INS and RNS in line with prior experimental research investigating narratives, including a plot and character in the stimuli (see Online Appendices A3 and A4; Lien & Chen, 2013). To maintain internal validity between the metaphor and narrative conditions, we used identical wording for the adjectives selected to describe the services. We controlled for brand name and stimulus layout. We used bullet points in the metaphor conditions but not in the narrative conditions, as this would interrupt the flow of the story. To check the manipulation of the message style (narrative vs. metaphor), we randomly presented one of the four experimental stimuli (a narrative and a metaphor for the INS and a narrative and a metaphor for the RNS) to a panel of 122 U.S. participants, followed by a questionnaire. Removal of those who failed the instructional manipulation check left 115 participants. Cell sizes ranged from 25 to 34 participants.

We used a four-item 7-point Likert scale to measure the extent to which participants perceived the information as narrative in style (“There are characters in the service description/There is a plot in the service description/There is a time shift in the service description/The service description reads like a story”; 1 = strongly disagree, 7 = strongly agree; adapted from Chang, 2009). We averaged these ratings into a single scale ($\alpha = .75$). To check whether participants perceived the metaphor as higher in metaphoricity than the narrative, we employed Jeong’s (2008) measure of metaphoricity, asking participants to indicate their agreement with one item on a 7-point scale (“I think the ad presents the message...”; 1 = very literally, 7 = very metaphorically). We controlled for participants’ age, education, and gender.

The manipulation was successful; participants rated the narrative stimuli as significantly higher in narrativity than the metaphor stimuli ($M_{\text{Narrative}} = 4.55$ vs. $M_{\text{Metaphor}} = 4.13$; $p < .05$). They also rated the metaphor stimuli as significantly higher in metaphoricity than the narrative stimuli ($M_{\text{Narrative}} = 2.97$ vs. $M_{\text{Metaphor}} = 4.44$; $p < .001$).

3.2. Method

Study 1 was a 2 (message style: metaphor vs. narrative) \times 2 (service newness: INS vs. RNS) between-subjects design. We randomly assigned an MTurk sample of U.S. participants to one of the four experimental conditions. Removal of 11 people who failed the instructional manipulation check resulted in a sample size of 219 participants. Cell sizes ranged from 49 to 66 participants. Of the participants, 49.8% were women, the mean age was 38, and the age range was 18–67 years.

We measured adoption intentions using a four-item scale: “This is a service I would like to try/I would like to have more information about this service/I would like to see a demonstration of this service/I would recommend this service to a friend” (1 = strongly disagree, 7 = strongly agree;

adapted from Ait El Houssi, Morel, & Hultink 2005; Bellizzi, Minas, & Norvell, 1994; Talke & Snelders, 2013). We averaged these items into a single scale ($\alpha = .88$). A confirmatory factor analysis showed that all the factor loadings were statistically significant (all standardized loadings $> .70$, all $ps < .001$) and the overall model fit was acceptable (SRMR = .056; CFI = .90).

We measured the covariates controlled for throughout the study with validated scales for need for cognition (NCOG; 18 items; Cacioppo, Petty, & Kao, 1984; we averaged these ratings into a single scale, $\alpha = .92$), tolerance of ambiguity (TOA; 12 items; McQuarrie & Mick, 1992; we averaged these ratings into a single scale, $\alpha = .72$), education, and gender. We measured metaphoric thinking ability (MTA) with Burroughs and Mick's (2004) sentence completion test (MTA; $\alpha = .84$). Participants completed nine truncated sentences in a manner that offers a concise but vivid image of the concept. These sentences were coded by two independent raters, and inter-rater reliability was measured (inter-rater reliability for the nine-item scale: $\alpha = .90$). Reliability for the nine items ranged from .69 to .84. Discrepancies were discussed between the two raters to reach consensus. Gaming is a category that can be associated with higher or lower levels of consumer involvement. In addition, prior work indicates that involvement moderates the persuasive effects of communication strategies (Claeys & Cauberghe, 2014). Therefore, we also controlled for involvement (11 items; Laroche, Bergeron, & Goutaland, 2003, adapted from Zaichkowsky, 1985; we averaged these ratings into a single scale, $\alpha = .97$). Furthermore, the scale used to measure service newness in pre-test 1 served as a manipulation check in the main experiment.

3.3 Results

3.3.1. Manipulation checks

To confirm the results of pre-test 1, we assessed the validity of the service newness manipulation using analysis of covariance (ANCOVA), with newness as the dependent variable and the INS versus RNS conditions as the independent variables. As expected, there was a main effect of the INS versus RNS conditions on perceived newness ($M_{INS} = 5.50$ vs. $M_{RNS} = 6.15$; $F(7, 216) = 11.91, p < .01$).

3.3.2. Hypotheses testing results

To test H1, we conducted a 2×2 ANCOVA and explored the message style \times service newness interaction on adoption intentions, while controlling for NCOG, TOA, education, gender, MTA, and involvement. This interaction was significant ($F(9, 216) = 9.624, p < .01$; see Fig. 1). We then conducted pairwise comparisons for the INS and RNS conditions to investigate H1a and H1b, respectively. The analysis showed a main effect of message style for the INS ($F(6, 98) = 12.509, p < .01$), in support of H1a; for the INS, the metaphor increased adoption intentions significantly more than the narrative ($M_{Metaphor} = 5.44$ vs. $M_{Narrative} = 4.40$). H1b proposed that for RNSs, communicating the service using metaphor versus narrative would not differentially affect adoption intentions. In support, we found no significant impact of message style on adoption intentions toward the RNS ($F(7, 117) = 1.948, p > .10$). For the RNS, the use of a metaphor no longer led to significantly higher adoption intentions than the use of a narrative ($M_{Metaphor} = 5.05$ vs. $M_{Narrative} = 5.44$).

INSERT FIGURE 1 ABOUT HERE

3.4. Discussion

The findings show that metaphors and narratives differentially affect consumers' adoption intentions toward new services and that the level of service newness moderates this effect. Specifically, for the INS, the use of a metaphor led to significantly higher adoption intentions than

the use of a narrative, while for the RNS, this effect disappeared. This is consistent with the resource-matching perspective (Anand & Sternthal, 1989) and with the argument that if the resource demands of a stimulus are greater than consumers' available resources, such as when a service is highly novel, consumers are left puzzled and unable to comprehend the meaning of the metaphor. This effectively undermines the ability of a metaphor to enhance adoption intentions. The findings from Study 1 show that a metaphor is a more powerful communication strategy for INSs than a narrative. The benefits of metaphors over narratives lie in the positive persuasive outcomes stemming from the polysemous incongruity inherent in the metaphor (Berlyne, 1971). These pleasurable outcomes occur only when individuals can successfully solve the incongruity (McQuarrie & Mick, 1996).

Study 1 highlights the beneficial impact of metaphors over narratives for the promotion of INSs. In Study 2, we question the appropriateness of highly figurative metaphors in advertising innovative new services and compare low- versus high-figurativeness metaphors across service newness (INS vs. RNS). Specifically, we investigate how metaphor figurativeness influences adoption intentions across the two levels of service newness.

4. Study 2

4.1. Pre-tests

4.1.1. Pre-test 1: service newness

As in Study 1, we created a fictitious brand from a real service—"Savvy Vacations," an innovative travel agency offering personalized vacations. We again manipulated service newness by changing one feature: digital screens in-store (INS) versus virtual reality pods in-store (RNS). We conducted a pre-test on MTurk ($n = 60$) to measure service newness ($\alpha = .94$) and attractiveness ($\alpha = .89$) using the same scales as in Study 1. We randomly assigned the MTurk sample of U.S.

participants to one of the two experimental conditions (i.e., INS vs. RNS). Cell sizes were 29 and 31 participants, respectively. The results indicate that participants rated the RNS as significantly newer than the INS ($M_{RNS} = 6.09$ vs. $M_{INS} = 4.94$; $p < .001$). As expected, we found no significant difference in attractiveness between the INS and the RNS ($M_{RNS} = 6.11$ vs. $M_{INS} = 5.72$; $p > .10$).

4.1.2. Pre-test 2: figurativeness

We then developed two metaphors: one low in figurativeness and one high in figurativeness. The low-figurativeness metaphor likened the new service to the concept of a crystal ball, conveying the idea that one can gaze into it to divine a future vacation. The high-figurativeness metaphor compared the new service to a wormhole, which creates a tunnel-like shortcut between two far-off points in space through which one can instantly travel, conveying the instant transportation to a desired vacation destination (see Online Appendices B1–B4). We conducted a pre-test on MTurk ($n = 239$) to measure the figurativeness of the metaphors. Each participant was exposed to one of four conditions (i.e., metaphor low in figurativeness vs. metaphor high in figurativeness for both the INS and the RNS). We removed 10 participants for failing our manipulation criteria check. Cell sizes ranged from 54 to 61 participants. We used a 7-point scale to assess the figurativeness of the metaphors, anchored by “artful, clever/straightforward, matter of fact” (Phillips & McQuarrie, 2009). The results confirmed that the high-figurativeness metaphor was significantly more figurative than the low-figurativeness metaphor ($M_{\text{highfigurative}} = 5.75$ vs. $M_{\text{lowfigurative}} = 5.36$; $p < .01$). As in Study 1, we aimed to control for attitude toward and familiarity with the metaphorical base, to enhance internal validity and ensure that the impact of the metaphor on consumer adoption intentions was due to its figurativeness. We found no significant difference in familiarity ($M_{\text{highfigurative}} = 3.14$ vs. $M_{\text{lowfigurative}}$

= 3.58; $p > .10$) or attitude toward the high- and low-figurativeness metaphorical bases ($M_{\text{highfigurative}} = 4.79$ vs. $M_{\text{lowfigurative}} = 5.19$; $p > .05$).

4.1.3. Pre-test 3: figurativeness and ease of estimating benefits

We conducted another pre-test examining how metaphor figurativeness affects ease of estimating benefits to gain insight into how metaphor figurativeness affects message recipients' cognitions. This pre-test involved a one-way analysis of variance examining the impact of low- versus high-figurativeness metaphors on figurativeness and ease of estimating benefits ($n = 157$). The stimuli employed were the low- and high-figurativeness metaphors developed for the INS, and participants were exposed to one of these two stimuli. We excluded people who failed the instructional manipulation check, which left 120 participants. Cell sizes were 59 and 61 participants, respectively.

We repeated the figurativeness pre-test using a 7-point scale to assess the figurativeness of the metaphor (anchored by "artful, clever/straightforward, matter of fact"). We then measured ease of estimating benefits using a three-item 7-point Likert-type scale measuring (1) how uncertain participants felt about estimating the service benefits (not at all certain/very certain), (2) how uncertain they felt about Savvy Vacations' ability to deliver the benefits (not at all certain/very certain), and (3) how difficult they found it to estimate the benefits (not at all difficult/very difficult), adapted from Hoeffler (2003). We averaged the ratings into a single scale ($\alpha = .60$).

We found that participants perceived the high-figurativeness metaphor as significantly more figurative than the low-figurativeness metaphor ($M_{\text{highfigurative}} = 5.58$ vs. $M_{\text{lowfigurative}} = 4.93$; $p < .05$). The low-figurativeness metaphor led to significantly higher ease of estimating benefits than the high-figurativeness metaphor ($M_{\text{highfigurative}} = 3.56$ vs. $M_{\text{lowfigurative}} = 4.43$; $p < .05$).

4.2. Method

Study 2 was a 2 (metaphor figurativeness: low vs. high) \times 2 (service newness: INS vs. RNS) between-subjects design, with adoption intentions as the dependent variable. We randomly assigned an MTurk sample of 192 U.S. participants to one of the four experimental conditions. We removed two people for failing the instructional manipulation check, which left 190 participants in the final analysis. Cell sizes ranged from 45 to 52 participants. Of the participants, 51.6% were women, the mean age was 38, and the age range was 19–76 years.

We used the same four-item adoption intention scale as in Study 1. We averaged the items of this scale into a single scale ($\alpha = .94$). A confirmatory factor analysis showed that all the factor loadings were statistically significant (all standardized loadings $> .82$, all $ps < .001$) and the overall model fit was good (SRMR = .019; CFI = .978).

Furthermore, we measured negative cognitive responses with a thought-listing task (Cacioppo & Petty, 1981; Wright, 1973). We asked participants to list up to 12 thoughts they had while reading the stimuli, whether favorable, opposed, or irrelevant to the service. These thoughts were later coded by two judges independently as negative, positive, or neutral, with neutral defined as irrelevant to the service (inter-rater reliability for each thought: $\alpha = .91$ – 1.00 ; inter-rater reliability for negative statement count: $\alpha = .97$). We calculated negative cognitive responses as a percentage of negative thoughts compared with the total thought count. As in Study 1, we controlled for NCOG ($\alpha = .96$), TOA ($\alpha = .76$), education, gender, and MTA ($\alpha = .88$; inter-rater reliability for the scale: $.93$). As a manipulation check, participants rated the figurativeness of the language used in the service description (1 = not at all figurative, 7 = highly figurative; Kronrod & Danziger, 2013).

4.3. Results

4.3.1. Manipulation check

The manipulation check indicated a significant difference in figurativeness between the low-figurativeness and the high-figurativeness metaphors for both the INS ($M_{\text{lowfigurative}} = 3.91$ vs. $M_{\text{highfigurative}} = 5.48$; $F(1, 97) = 26.26, p \leq .01$) and the RNS ($M_{\text{lowfigurative}} = 3.60$ vs. $M_{\text{highfigurative}} = 4.23$; $F(1, 93) = 5.79, p \leq .05$) conditions.

4.3.2. Hypotheses testing results

To test H2, we conducted a 2×2 ANCOVA and explored the metaphor figurativeness \times service newness interaction on adoption intentions, while controlling for NCOG, TOA, education, gender, and MTA. We found a significant interaction effect of service newness and metaphor figurativeness on adoption intentions ($F(8, 191) = 7.55, p < .01$; see Fig. 2). To test H2a and H2b, we conducted two pairwise ANCOVAs, investigating the effect of metaphor figurativeness on adoption intentions first for the INS and then for the RNS. In the INS conditions, the low-figurativeness metaphor led to significantly higher adoption intentions than the high-figurativeness metaphor ($M_{\text{lowfigurative}} = 5.43$ vs. $M_{\text{highfigurative}} = 4.33$; $F(6, 96) = 17.42, p < .001$), in support of H2a. However, metaphor figurativeness did not significantly affect adoption intentions in the RNS conditions ($M_{\text{lowfigurative}} = 5.10$ vs. $M_{\text{highfigurative}} = 4.88$; $F(6, 92) = .843, p > .10$), in support of H2b.

INSERT FIGURE 2 ABOUT HERE

We hypothesized that for INSs, negative cognitive responses would mediate the effect of metaphor figurativeness on consumers' adoption intentions (H3). We explored this proposition by performing a mediation analysis with metaphor figurativeness (high vs. low) as the independent variable, negative cognitive responses as the mediator, and adoption intentions as the dependent variable (Process Model 4; Hayes, 2017). The results showed a significant effect of metaphor figurativeness on negative cognitive responses ($\beta = -22.92$; $t(7,89) = 3.56$; $p < .01$). In turn, increased negative cognitive responses had a significant, negative impact on adoption intentions

toward INSs ($\beta = -.07$; $t(7,89) = -8.01$; $p < .001$). Furthermore, the confidence interval of the indirect effect of metaphor figurativeness showed that using a low-figurativeness metaphor in the service description had a significant, positive indirect effect on adoption intentions through reduced negative cognitive responses (95% confidence interval: .76, 2.77). These results provide support for H3. The residual direct effect of metaphor figurativeness on adoption intentions toward INS was statistically significant ($\beta = 2.05$; $t(7,89) = 3.43$; $p < .01$), indicating a partial mediation (Zhao, Lynch, & Chen 2010). In the INS conditions, we found that the percentage of cognitive responses consisting of negative thoughts was significantly higher for the high- than the low-figurativeness metaphor ($M_{\text{lowfigurative}} = 16.5\%$ vs. $M_{\text{highfigurative}} = 36.08\%$; $F(6, 96) = 12.63$, $p < .01$). Surprisingly, we found that the percentage of cognitive responses consisting of negative thoughts was also higher for the high- than the low-figurativeness metaphor in the RNS conditions ($M_{\text{lowfigurative}} = 15.27\%$ vs. $M_{\text{highfigurative}} = 30.42\%$; $F(6, 94) = 6.842$, $p \leq .01$). Thus, the high-figurativeness metaphor increased negative cognitive responses to a greater extent than the low-figurativeness metaphor regardless of the level of newness of the service offering.

4.4. Discussion

The results show that metaphor figurativeness (low vs. high) significantly affects adoption intentions, but only for INSs. The findings indicate that for such services, metaphors low in figurativeness lead to significantly higher adoption intentions than metaphors high in figurativeness. Individuals' reduced ease of estimating benefits might partly explain the negative impact of high-figurativeness metaphors on adoption intentions toward INSs. As expected, negative cognitive responses mediate the impact of metaphor figurativeness on adoption intentions toward INSs. This finding is in line with the principles of resource-matching theory. Specifically, individual resource capacity was not sufficient to meet the demands of the highly figurative

metaphor, which overwhelmed participants, leading to negative thinking. This is consistent with related work on persuasive imagery and metaphors (Phillips, 2003).

As hypothesized, communicating the RNS using a metaphor high versus low in figurativeness did not result in significantly different adoption intentions. This suggests that an elevated level of service newness increases the cognitive demands placed on individuals' cognitive resources, which makes resolving the incongruity of the metaphor challenging, regardless of the metaphor's level of figurativeness. This finding corroborates research showing that low-deviation messages are most effective at limiting negative consequences (Fox, Rinaldo, & Amant, 2015).

5. General discussion

5.1. Theoretical contributions

In this research, we showed that metaphors enhance adoption intentions more than narratives for INs but not for RNSs. We also demonstrated that low-figurativeness metaphors enhance adoption intentions more than high-figurativeness metaphors for INs but not for RNSs and that consumers' negative cognitive responses underlie this effect.

Our findings add to the marketing literature in several ways. First, we contribute to extant literature on consumers' adoption intentions toward innovations (Feiereisen et al., 2013; Hoeffler, 2003; Talke & Snelders, 2013; Zhao, Hoeffler, & Zauberan, 2011). To the best of our knowledge, our research is the first to investigate the effect of metaphors on consumers' adoption intentions toward innovations in an experimental setting. This research is also the first to compare the effect of metaphors versus narratives on consumers' adoption intentions and to examine the effectiveness of two types of metaphors (i.e., low vs. high figurativeness) in an innovation context. Our findings contribute to the literature on the effectiveness of narratives (e.g., Schweitzer & Van den Hende, 2017) by showing that narratives do not outperform and may even underperform metaphors in the

promotion of INSs. While Van den Hende and Schoormans (2012) find that narratives are suitable for the promotion of new products because they allow the creation of a narrative world in which the new product plays a role, these authors do not compare the effectiveness of narratives with that of metaphors. We show that metaphors enhance adoption intentions more than narratives for INSs, a finding that receives support in prior work on the “pleasure of the text” (Barthes, 1985) and by the structure-mapping theory of analogical reasoning (Gentner, 1983; Gentner & Holyoak, 1997).

Second, the findings also enrich the literature on processing fluency (Lee & Labroo, 2004; Reber et al., 1998; Schwarz, 2004) and metaphor figurativeness (McQuarrie & Mick, 1996; Phillips & McQuarrie, 2009). Extant work examines the impact of metaphors on consumer beliefs under conditions of incidental ad exposure and finds that only highly figurative metaphors alter specific consumer beliefs (Phillips & McQuarrie, 2009). Related research illustrates an inverse relationship between the degree of incongruity in a visual metaphor and ad comprehension (Mohanty & Ratneshwar, 2015). However, to the best of our knowledge, no research has examined figurativeness, a central characteristic of metaphors, in the context of consumers’ adoption intentions. Our findings show that when cognitive demand is not overly high (i.e., for INSs), high-figurativeness metaphors may overwhelm and frustrate consumers to a greater extent than low-figurativeness metaphors, increase negative cognitive responses, and negatively affect adoption intentions. As such, communicating the benefits of INSs using low-figurativeness metaphors can be a viable way to enhance adoption intentions.

5.2. Managerial implications

Our research is of practical value to new service managers and marketers. Marketers face complex decisions and tradeoffs in their new service communication strategies, and our research offers directions that can help guide these decisions. Overall, we show that firms would do well to

employ metaphors as part of their approach. However, we also demonstrate that firms should account for the level of service newness when developing their communication strategies. Metaphors represent a useful tool to communicate the benefits of INSs. This is a valuable finding for marketers, as metaphors can communicate complex and abstract ideas quickly and vividly. For example, Bank First, an Australian bank, employed the metaphor of Scotch tape shaped as a baby stroller to represent people putting their dreams on hold. It is up to the audience to solve the incongruity and decipher the promotional message (i.e., Bank First will help consumers fulfill their dreams). Such symbolic expressions can convey service benefits in fresh ways and bring abstract ideas to life. This is particularly relevant for services whose benefits can be somewhat abstract. Furthermore, as metaphors tend to degrade over time (McQuarrie & Mick, 1996), it is essential to replace them regularly to ensure that they do not lose meaning and power. The finding that negative cognitive responses play a crucial role in adoption intentions provides further directions for managerial action. We find that avoiding negative cognitive responses when using metaphors to promote new services is paramount. Specifically, low-figurativeness metaphors should be favored to ensure that the metaphors do not obscure more than they illuminate. The task for marketers is to create compelling metaphors without placing unnecessary demands on consumers, which would make it too challenging for them to solve the incongruity inherent in the metaphor.

Managers should also consider the use of metaphors not only in launch campaigns but also in earlier new service development phases. Innovative design teams may use metaphors as a research tool when working in unfamiliar subject areas. For example, Schraefel, Hughes, Mills, Smith, and Frey (2004) tasked a design team with developing a digital lab book system for use by university chemists. However, none of the designers knew anything about chemistry or how chemists work. Therefore, they used a metaphor (“Tea is chemistry”) to research these topics. The

designers had the chemists prepare tea as though it was a chemistry experiment and thus could understand chemistry through its differences from and similarities to tea. Our findings suggest that service design teams could consider using metaphors to stimulate their creativity. This approach could also be implemented in concept and prototype tests, with the selection of metaphors based on their potential to reduce cognitive strain on users. Metaphors integrated early in the concept testing stage can shape service concepts in a beneficial way, potentially diminishing barriers to adoption at a later stage.

We find that for RNSs, both message style (metaphor vs. narrative) and metaphor figurativeness (low vs. high) do not differentially affect adoption intentions. Marketing such novel services brings about specific challenges because consumers often struggle to understand their unique benefits and may be discouraged by the elevated level of uncertainty and risks associated with these innovations (Hoeffler, 2003). For example, the RNS used in Study 2 is highly novel: an innovative travel agency employing virtual reality pods in-store. Thus, managers may benefit from focusing efforts on educating consumers about RNSs before trying to persuade them to adopt.

5.3. Limitations and future research directions

Despite the robustness of the results, this research has limitations that offer fruitful opportunities for further research. First, Study 1 used a video game rental service, and Study 2 used a travel agency. These services may be considered hedonic services. According to prior work, hedonic benefits refer to the service's aesthetic, experiential, and enjoyment benefits, whereas utilitarian benefits refer to the functional, instrumental, and practical benefits of a service (Batra & Ahtola, 1991). Previous studies suggest that product/service type (i.e., hedonic vs. utilitarian vs. hybrid) should be taken into account when developing marketing communications for innovations

(Feiereisen et al., 2013). Thus, it may be helpful to replicate our studies by focusing on utilitarian services (e.g., intelligent financial services) rather than hedonic services.

Second, we conveyed the metaphors and narratives used in our studies using words only, to attain a high level of control. This may have limited the generalizability of our results, as marketing communications often include a combination of words and pictures. Thus, we recommend that future research test whether our findings hold when stimuli include both words and pictures.

Third, we focused on the impact of one specific rhetorical trope, metaphor, compared with narrative on adoption intentions toward INs and RNs. The impact of alternative rhetorical tropes such as irony or pun (whose levels of figurativeness are similar to those of metaphors; McQuarrie & Mick, 1996) in comparison with narratives remains to be examined. An assumption might be that rhetorical tropes with similar levels of figurativeness would lead to similar results. However, the impact of metaphors on adoption intentions toward new services is due not only to the figurativeness but also to the cross-domain comparison property inherent in metaphors. Therefore, comparing narratives with other rhetorical tropes would represent a fruitful avenue for further research. In addition, future scholarly work could compare the impact of metaphors versus alternative rhetorical tropes on adoption intentions toward new services. We expect that metaphors would outperform other rhetorical tropes with similar levels of figurativeness, but this remains an additional avenue for research.

Fourth, our research does not explore the impact of less figurative rhetorical figures (e.g., rhetorical schemes such as repetition or reversal; McQuarrie & Mick, 1996) in comparison with either metaphors or narratives on adoption intentions toward new services. Schemes are rhetorical figures that contain extra redundant information, in contrast with tropes, which are incomplete. As

such, processing schemes requires less cognitive effort than processing tropes, and individuals are less rewarded in terms of the “pleasure of the text” (Barthes, 1985). Therefore, we would expect both rhetorical tropes (metaphors in particular) and narratives to outperform rhetorical schemes under certain conditions. However, this research question would benefit from scholarly attention, particularly in light of Study 2’s finding that low-figurativeness metaphors outperform high-figurativeness metaphors in enhancing adoption intentions toward INSs.

Finally, we note that the pattern of results of the narrative in Study 1 is consistent with the pattern of results of the high-figurativeness metaphor in Study 2. Specifically, in Study 1, adoption intentions after exposure to a narrative were higher for the RNS ($M = 5.43$) than for the INS ($M = 4.4$). In Study 2, adoption intentions after exposure to a high-figurativeness metaphor were also higher for the RNS ($M = 4.88$) than for the INS ($M = 4.33$). Although we did not examine whether these differences reached significance, as this was not the focus of our study, future research could investigate whether (1) narratives and (2) high-figurativeness metaphors can enhance adoption intentions more for RNSs than for INSs.

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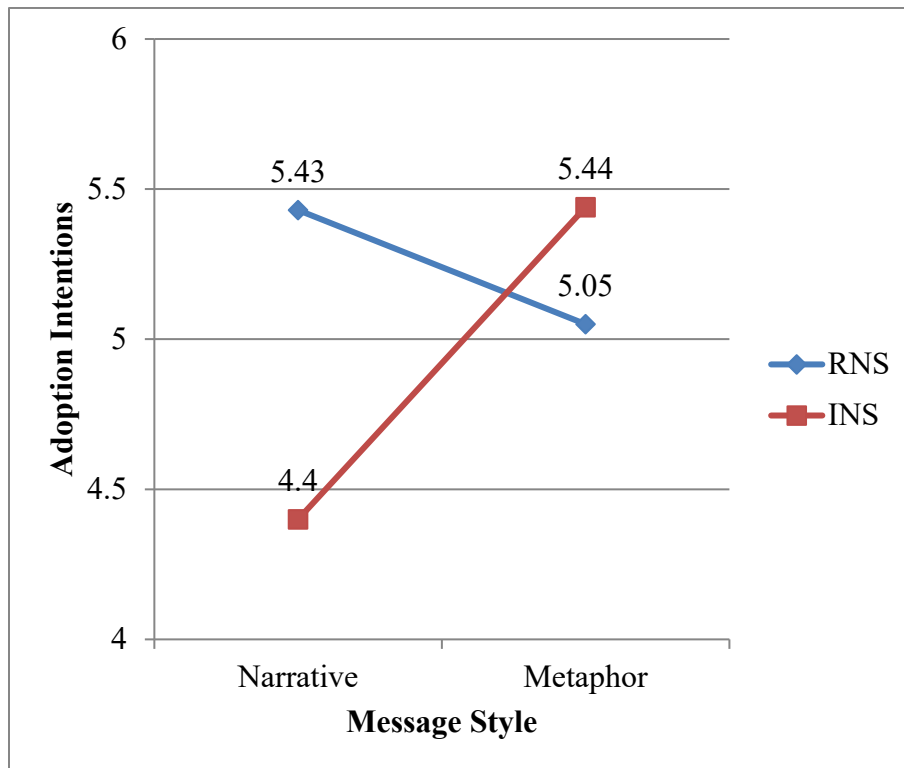
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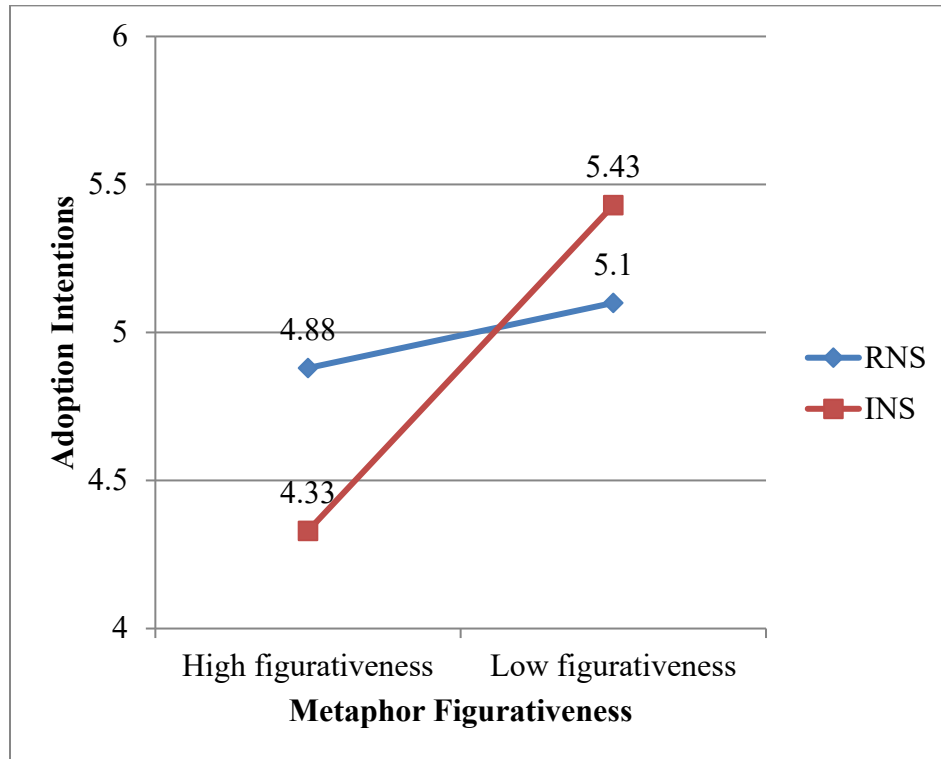
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Fig. 1. Interaction effect of message style and service newness on adoption intentions.



Covariates (F; p): NCOG (1.07; .3), TOA (0.61; .44), education (0.9; .34), gender (1.49; .22), MTA (3.63; .06), involvement (24.83; .00).

Fig. 2. Interaction effect of metaphor figurativeness and service newness on adoption intentions.



Covariates (F; p): NCOG (1.68; .20), TOA (.91; .34), education (3.35; .07), gender (2.06; .16), and MTA (.78; .38).

Online Appendix

A. Study 1 Stimuli

A1. Metaphor stimulus for the RNS

Ultimate Gaming Rentals

Gain Paranormal Powers!

- Ultimate Gaming Rentals is a new futuristic video game rental service introduced by a major international luxury hotel chain.
- What really distinguishes Ultimate Gaming Rentals from other hotel services is that hotel customers can gain paranormal powers by exclusively hiring new, cutting-edge video game consoles. These futuristic consoles feature a built-in mind control system, which allows gamers to gain paranormal powers, controlling the objects on the screen using their thoughts.
- Located inside the game console, the mind control system consists of high-sensitivity neurosensors that can remotely detect tiny electronic signals emitted by the brain when a person thinks.
- Thus, the consoles hired out to hotel customers via Ultimate Gaming Rentals allow gamers to push, pull, lift, and rotate objects on the screen simply through paranormal powers.
- As such, the futuristic system provides players with a psychic mode of game control, and therefore a truly novel, innovative experience. The mind control system is designed exclusively for hire via Ultimate Gaming Rentals and is not available anywhere else.

A2. Metaphor stimulus for the INS

Ultimate Gaming Rentals

Be Tom Cruise in *Minority Report*!

- Ultimate Gaming Rentals is a new “sci-fi” video game rental service introduced by a major international luxury hotel chain.
- With Ultimate Gaming Rentals hotel customers can exclusively hire the game consoles during their stay, transforming their room into Spielberg’s action mystery thriller film!
- Like many existing game consoles, they have motion-sensing capabilities. That is, players can transform themselves into Tom Cruise’s character in *Minority Report* as the consoles detect the gamers' movement and allow the gamers to control the game-play using a wireless handheld controller.
- In contrast with existing game consoles, they feature built-in motion-sensing enhancers that magnify the infrared signals emitted by the wireless controller, giving you Tom Cruise’s powers from *Minority Report*. As such, the consoles detect movement with 10–15% higher accuracy and 2–3 meters longer range.
- As such, the motion-sensing enhancer provides players with a gaming experience that allows them to be Tom Cruise in *Minority Report*. The motion-sensing enhancer is designed exclusively for hire via Ultimate Gaming Rentals and is not available anywhere else.

A3. Narrative stimulus for the INS

Ultimate Gaming Rentals

Experience the latest video game technology: Nicky's Story

Meet Nicky. Nicky is an expert video gamer who constantly seeks out the very latest advances in gaming. From attending events to hosting game forums, Nicky is in the know! Nicky's latest discovery is Ultimate Gaming Rentals, a new video game rental service introduced by a major international luxury hotel chain. What Nicky loves most about Ultimate Gaming Rentals is that new video game consoles can be exclusively hired while staying at the hotel. Like many game consoles Nicky has used before, they have motion-sensing capabilities. That is, they can detect Nicky's movements and allow Nicky to control the game-play using a wireless handheld controller. However, Nicky has never experienced Ultimate Gaming Rentals' novel feature of built-in motion-sensing enhancers, which magnify the infrared signals emitted by the wireless controller. As such, the consoles detect movements with 10–15% higher accuracy and 2–3 meters longer range. The motion-sensing enhancer provides Nicky with a novel gaming experience. The motion-sensing enhancer is designed exclusively for hire via Ultimate Gaming Rentals and is not available anywhere else. Nicky will definitely be recommending Ultimate Gaming Rentals on his next blog post!

A4. Narrative stimulus for the RNS

Ultimate Gaming Rentals

Experience the latest video game technology: Nicky's Story

Meet Nicky. Nicky is an expert video gamer who constantly seeks out the very latest advances in gaming. From attending events to hosting game forums, Nicky is in the know! Nicky's latest amazing discovery is Ultimate Gaming Rentals, a brand new video game rental service introduced by a major international luxury hotel chain. What Nicky loves most about Ultimate Gaming Rentals is that new, cutting-edge video game consoles can be exclusively hired while staying at the hotel. These innovative consoles feature a built-in mind control system, which allows Nicky to actually control the objects on the screen using thoughts alone! Located inside the game console, the mind control system consists of high-sensitivity neurosensors that can remotely detect tiny electronic signals emitted by the brain when Nicky thinks. Thus, the consoles Nicky hired via Ultimate Gaming Rentals allow Nicky to push, pull, lift, and rotate objects on the screen simply through thinking. As such, the mind control system provides Nicky with an alternative mode of game control, and therefore a truly novel, innovative experience. The mind control system is designed exclusively for hire via Ultimate Gaming Rentals and is not available anywhere else. Nicky will definitely be recommending Ultimate Gaming Rentals on his next blog post!

B. Study 2 Stimuli

B1. Low-figurativeness metaphor for the RNS

Savvy Vacations' VR Crystal Ball

Experience your dream vacation by gazing through our vacation crystal ball!

- Savvy Vacations is an innovative chain of local convenient travel agents. We stand out from the crowd by providing outstanding digital content of vacation destinations, which enables you to gaze upon your dream vacation before booking.
- Our revolutionary new in-store immersive *Virtual Reality* (VR) pods provide your very own crystal ball that allows you to experience vacation destinations, hotel rooms, plane seats, and more. Our stores have special pods equipped with VR screens, surround sound, and radical digital scent technology.
- The cutting-edge VR pods allow you to walk around and gaze upon your desired destination. They can be customized to your preferences such as the weather and the time of day at your dream destination. These futuristic pods allow you to explore what your favorite destination looks, sounds and even smells like!
- Experts are on hand to help you divine your dream vacation. Savvy Vacations' VR crystal ball enables a personalized realistic experience of your planned journey and vacation, to allow you to instantly connect to your vacation destination.

B2. High-figurativeness metaphor for the RNS

Savvy Vacations' VR Wormhole

The space-time wormhole to your dream vacation!

- Travel via wormhole through space and time to your dream vacation before booking it with Savvy Vacations – an innovative chain of local convenient travel agents that provides outstanding digital content of vacation destinations.
- Step out of the boundaries of space and time by entering the revolutionary immersive *Virtual Reality* (VR) pods at our stores, which are equipped with VR screens, surround sound, and radical digital scent technology. Experience vacation destinations, hotel rooms, plane seats, and more.
- The cutting-edge VR pods allow you to take a wormhole to your dream destination. You can walk around and explore a realistic experience of your planned journey and vacation. These futuristic pods allow you to experience what your favorite destination looks, sounds, and even smells like!
- Experts at our stores are on hand to set up your desired destination on the special VR pods and customize it to your preferences such as the weather and the time of day at your dream destination. Savvy Vacations' VR Wormhole allows you to instantly connect to your vacation destination.

B3. Low-figurativeness metaphor for the INS

Savvy Vacations' Digital Crystal Ball

Experience your dream vacation by gazing through our vacation crystal ball!

- Savvy Vacations is an innovative chain of local convenient travel agents. We stand out from the crowd by providing outstanding digital content of vacation destinations, which enables you to gaze upon your dream vacation before booking.
- Our extensive digital content on our website and app provides your very own crystal ball that allows you to experience vacation destinations, hotel rooms, plane seats, and more.
- Our digital content allows you to walk around and gaze upon your desired destination. It can be customized to your preferences such as the weather and the time of day at your dream destination. The digital vacation brochures allow you to explore what your favorite destination looks and sounds like!
- Experts are on hand to help you divine your dream vacation. Savvy Vacations' Digital Crystal Ball enables a personalized realistic experience of your planned journey and vacation, to allow you to instantly connect to your vacation destination.

B4. High-figurativeness metaphor for the INS

Savvy Vacations' Digital Wormhole

The space-time wormhole to your dream vacation!

- Travel via a wormhole through space and time to your dream vacation before booking it with Savvy Vacations – an innovative chain of local convenient travel agents that stand out from the crowd by providing outstanding digital content of vacation destinations.
- Step out of the boundaries of space and time by entering our extensive digital content on our website and app. Experience vacation destinations, hotel rooms, plane seats, and more.
- Our digital content allows you to take a wormhole to your dream destination and explore a realistic experience of your planned journey and vacation. The digital vacation brochures allow you to walk through and to experience what your favorite destination looks and sounds like!
- Experts at our stores are on hand to show you your desired destination with our special digital content and help customize it to your preferences such as the weather and the time of day at your dream destination. Savvy Vacations' Digital Wormhole allows you to instantly connect to your vacation destination.