The Effects of Animistic Thinking, Animistic Cues, and Superstitions on Brand Responses on Social Media

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Abstract

Although marketers have been using various message tactics to breathe life into their brands, the concepts of animism and animistic cues, particularly in social media marketing, have received little theoretical and empirical attention. Therefore, we conducted two studies to uncover what drives animistic thinking on social media, how animism is linked to anthropomorphism, how animism can benefit brands online, and what the boundary conditions for this phenomenon are. The findings demonstrate that animistic (vs. non-animistic) cues elicit animistic thinking, which leads to more favorable brand evaluations. This effect is moderated by superstitious beliefs. The results provide new knowledge for both marketing researchers and practitioners, revealing that it is easier to activate animism than anthropomorphism on social media and that such activation can be done via easily devisable cues (such as simple movement), particularly when addressing highly superstitious consumers.

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Keywords: Animistic thinking; Animism; Animistic cues; Social media; Superstitions

Introduction

For years, marketers have endowed their brands with living characteristics by creating fictitious characters, spokescharacters, and mascots (e.g., the Michelin Man, Tony the Tiger, the Pillsbury Doughboy, Morris the Cat) or by equipping their products with body parts and bodily gestures (e.g., the talking M&M candies). With the advent of Facebook, Twitter, and YouTube, such efforts have become even more common, as social media allow more interaction than traditional media and enable the co-creation of highly interactive content. As a result, brands are nowadays presented in a way to imitate living agents that move, feel, and converse with their followers online (see, e.g., Charmin Bears sending tweets to DiGiorno Pizza [Dahl, 2018]).

Marketing attempts to breathe life into brands and products are usually aimed at triggering animistic or anthropomorphic thinking in consumers, which, in turn, is believed to facilitate attachment (Chandler & Schwartz, 2010), judgments (Aggarwal & McGill, 2007), attitudes (Sivaramakrishnan, Fang, & Zaiyong, 2007), behavior (Aggarwal & McGill, 2012), consumption choices (Murray & Haubl, 2009), or brand endorsements on social media (Bernritter, Verlegh, & Smit, 2016). Animistic thinking (animism) is the cognitive process of perceiving objects or abstract ideas as possessing living characteristics. It is a broader concept than anthropomorphic thinking (anthropomorphism), which denotes the quality of attributing exclusively human-like features to inanimate items or animals. Animism and anthropomorphism are closely linked yet distinct. For example, if we say that our motorcycle howls like a wolf, we animate; if we say that our motorcycle yells like our mother-in-law, we anthropomorphize; if we speak to our pet dog, we anthropomorphize but we do not animate (as the dog is a living being); if we speak to our car, we can either animate (by viewing it as a living being) or animate...
and anthropomorphize (by viewing it as a living person) (Guthrie, 1993, pp. 39–40). In general, animism is a broader phenomenon than anthropomorphism (anthropomorphism usually involves animistic thinking, but animistic thinking does not necessarily entail anthropomorphism) and, therefore, is more likely to occur when one interacts with nonliving objects, such as brands or products. For instance, when our car breaks down and we are angry at it, we do not necessarily perceive the car as being human, but we may implicitly think that it has somehow come alive and is able to manifest a will of its own (i.e., to break down deliberately).

Although animism can be triggered more easily than anthropomorphism (as the former requires signals of life in general rather than specifically human features), most prior investigations in the field of marketing have been limited to anthropomorphism and have examined a narrow set of cues that relate to the human body (Landwehr, McGill, & Herrmann, 2011; Maeng & Aggarwal, 2017), the first-person conversation style (Aggarwal & McGill, 2007; Araujo, 2018; Hubner Barcelos, Dantas, & Sénècé, 2018; Puzakova & Kwak, 2017; Toure-Tillery & McGill, 2015), or that are based on a simple request to imagine a given product as a person (e.g., Aggarwal & McGill, 2012; Chandler & Schwartz, 2010; Chen, Sengupta, & Adaval, 2018). While embodiment is the most popular method for eliciting anthropomorphic thinking (and is often combined with the first-person conversation style, e.g., Hur, Koo, & Hofmann, 2015; Reavey, Puzakova, Andras, & Kwak, 2018), asking participants to perceive an object as a human being is a problematic research technique because a coaxed response does not necessarily provide an accurate representation of how respondents perceive the world (some findings indicate that people do not spontaneously anthropomorphize brands, e.g., Romaniuk & Ehrenberg, 2012; Avis, Forbes, & Ferguson, 2014; for a discussion, see Avis, 2011). Overall, previous studies have not attempted to reach beyond human-like physiognomy and to test whether consumers engage in animism when not specifically told to do so.

As prior research has mostly focused on anthropomorphism and little scholarly work has been dedicated to animistic thinking per se (animism has been discussed—see, e.g., Avis, 2011—but not empirically conceptualized or tested), our two studies were designed to bridge this gap. We aimed to uncover what drives animistic thinking on social media, how animism is linked to anthropomorphism, and how animism, if successfully triggered, can benefit brands online. To address these goals, we distinguished between animistic thinking (a cognitive activity performed by the recipient of a message) and animistic cues (a visual and/or verbal rhetorical figure used by a marketer in a message to endow a brand with characteristics of a living being). Therefore, in a series of experimental studies, we tested a variety of animistic cues and searched for the boundary conditions for their effects by identifying superstitious consumers as those who are the most receptive to animistic cues.

Our work offers several important contributions. First, we distinguish animism from anthropomorphism. Whereas previous studies often conflated animistic and anthropomorphic thinking (Aggarwal & McGill, 2007; Beran, Ramirez-Serrano, Kuzyk, Fior, & Nugent, 2011; Chandler & Schwartz, 2010; Mourey, Olson, & Yoon, 2017), we show that these are two different phenomena that are triggered by different cues. As our experiments reveal, even when marketers strive to create the impression that their brand or product is a living being, this does not necessarily mean that consumers perceive brands as human beings (e.g., in Study 2, we used images of the human body and managed to elicit animism rather than anthropomorphism). Our findings contribute to the stream of research that demonstrates how hard it is to make people perceive brands as human agents—for example, different parts of the brain are usually activated when individuals evaluate a person versus a brand (Yoon, Gutchess, Feinberg, & Polk, 2006), and consumers hardly ever spontaneously use personality traits to make judgments about brands (Romaniuk & Ehrenberg, 2012). Our results show that animism might be easier to trigger than anthropomorphism, thus offering practical insights for marketers, particularly in online environments.

Second, we provide a conceptualization of what drives animism, and we put forward a greater variety of animistic cues than what has been tested in past research. We draw from animism literature and show that self-initiated movement alone works as an animistic cue in digital marketing (Study 1). Furthermore, we investigate how one could meaningfully exploit movement by embedding this cue into social media messages to elicit animism (Study 2). Specifically, we examine how depictions of animated product rituals, riddles, and embodiment lead to animistic thinking and subsequent inferences about brands. This is an important contribution because prior studies have examined rather simple forms of movement (Tremoulet & Feldman, 2000; Tremoulet & Feldman, 2006), while we tested a broader selection of motions in the more complex context of social media communication. In sum, our research contributes to the current literature and practice by showing that one can elicit the animistic mode of thinking via a large number of cues that are relatively easy to implement online (such as movement) and that animism itself is beneficial for brands because it drives positive attitudes and purchase intentions (unlike anthropomorphism, which has been found to produce negative responses under certain circumstances, e.g., the phenomenon of uncanny valley [Mori, MacDorman, & Kageki, 2012]).

The final contribution lies in identifying those consumer segments that are most receptive to animistic cues. Specifically, we found that the impact of animistic cues was traced mostly among the audiences who held superstitious beliefs, a trait that influences many important consumer decisions (such as those regarding insurance policies or financial investments [Dolansky, Schindler, & Adams, 2011; Jiang, Cho, & Adaval, 2009]) and is particularly evident in people facing uncertainty, failure, or stress (e.g., athletes, brides/grooms in spe, airline passengers, students). Even though both superstition and animism have been discussed as two forms of cognitive error (Haselton & Nettle, 2006), no one to date has linked the two empirically, particularly in the field of social media marketing. In other words, our research contributes to the literature by elaborating the connection between superstitious beliefs,
animism, and movement as an animistic cue in online messages. Consequently, our findings contain important managerial information and can be useful in audience segmentation and targeting practices.

**Conceptual Background**

In the following sections, we distinguish animism from anthropomorphism and identify the cues related to both modes of thinking. We start by discussing what animism is and how it differs from anthropomorphism. Next, we present the triggers of animistic and anthropomorphic thinking, respectively. Finally, we discuss superstitious beliefs as moderating the effects of animistic cues on animistic thinking and the subsequent brand responses (see Fig. 1).

**Animism Versus Anthropomorphism**

Animism refers to the cognitive inference that inanimate objects are *alive*, while anthropomorphism refers to the cognitive inference that inanimate objects are *human* (Epley, Akalis, Waytz, & Cacioppo, 2008; Guthrie, 1993; Waytz, Cacioppo, & Epley, 2010). In other words, animism is based on attributing the characteristics of *living* beings to nonliving objects and involves detecting symptoms of *life* in one's own environment, while anthropomorphism entails the attribution of *humanness* and human-like forms (the Ancient Greek word “anthrōpos” means “human,” and “morphē” means “shape”). The distinction between animistic and anthropomorphic thinking is rather clearly drawn in the fields of biology, psychology, and religious thought (see, e.g., Epley, Waytz, & Cacioppo, 2007; Epley et al., 2008; Guthrie, 1993; McDonald & Stuart-Hamilton, 2000; Piaget, 1965; Waytz, Cacioppo, & Epley, 2010), but marketing and consumer-behavior researchers have often conflated the two concepts. For example, Chandler and Schwartz (2010, p. 138) stated that “anthropomorphic beliefs about objects lead people to treat them as if they were alive”; Mourey, Olson, and Yoon (2017, p. 414) defined anthropomorphic products as “featuring characteristic of being alive”; Aggarwal and McGill (2007) measured anthropomorphism with an item regarding the extent to which an object “had come alive”; and Beran et al. (2011, p. 539) used these terms interchangeably and conceptualized animism as the “tendency to ascribe human characteristics to an inanimate object.” In sum, combining anthropomorphism and animism is quite common in consumer studies and it stems from the idea that humanness essentially signifies a certain form of life. However, as biologists would argue, being alive does not necessarily mean being human (animals and plants are living organisms, but they mostly lack anthropomorphic forms, such as the face or opposable thumbs, and competences, such as speech). Therefore, animism should be considered a distinct phenomenon that only sometimes involves anthropomorphism.

There are certain similarities between anthropomorphism and animism—for example, both are theorized as two-step cognitive processes (Epley et al., 2007). In the case of animism, an individual must first recognize that an object has been endowed with living characteristics (step 1) and then consider it alive (step 2). In other words, in the animistic mode of thinking, first we use our existing knowledge about a living agent (e.g., about an animal with crypsis abilities) and apply it to a target (e.g., our lost keys), and then we perceive the target object as if it were endowed with life (e.g., we think our keys intentionally blended into the environment to avoid us). In the same way, anthropomorphism begins with activating one's knowledge about human agents and then applying that knowledge via inductive inferences to a given target.

**Animistic Cues Versus Anthropomorphic Cues**

As is the case with other modes of thinking, both animism and anthropomorphism are likely to be activated by environmental influences and cues. A single advertising message or a marketing appeal can serve as a viable stimulus to induce animistic cognitions. However, we do not know how this

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**Fig. 1.** Theoretical framework and hypotheses.
message or appeal should be structured and what components it should have. Given the difference between animism and anthropomorphism with regard to the subject of thought (the former has to do with perceptions of life and the latter with perceptions of humanness), each phenomenon should be triggered by different cues.

The conceptualization of animistic cues begins with the question of what it means to be alive and what constitutes life per se. In purely biological terms, something can be considered alive if it displays such characteristics as growth, movement, respiration, reproduction, excretion, nutrition, and irritability (sensitivity). In other words, living organisms change their size and weight, move, breathe, create other organisms, remove waste products, eat, and sense changes in their environment. Therefore, plants, bacteria, animals, hominids, or anything that seems to perform these basic functions can be taxonomically classified as alive.

Past research in various domains of psychology has shown that perceptions of life can be easily triggered by depicting just one of the functions mentioned above, i.e., movement (McDonald & Stuart-Hamilton, 2000; Nielsen, Vuust, & Wallentin, 2015; Piaget, 1965; Santos, David, Bente, & Vogeley, 2008; Tremoulet & Feldman, 2000; Tremoulet & Feldman, 2006). Self-propelled and autonomous motion seems to be the most easily observable function that points to an object being alive. For example, in developmental psychology, children were found to perceive movement as a basic feature of life, as illustrated in the following excerpt from an interview with a 9-year-old respondent: “You know what it is to be alive?—Yes, to be able to move—Is the lake alive?—Not always—Why not?—Sometimes there are waves and sometimes there aren’t any—Is a cloud alive?—Yes, it moves as if it were walking—Is a bicycle alive?—Yes, it goes” (Piaget, 1965, p. 200). In cognitive psychology, respondents (regardless of their age) have been observed to attribute life to moving dots and rectangles (Tremoulet & Feldman, 2000; Tremoulet & Feldman, 2006), 3D computer animations (Santos et al., 2008), and moving sounds (Nielsen et al., 2015). All these findings suggest that an object is likely to be perceived as being alive when it moves on its own (i.e., there is no perceivable external cause of movement). Therefore, one may expect that an advertising message with a moving product would be more likely to function as an animistic cue and drive animism than a message with the same product depicted as static.

Distinguishing animistic cues from anthropomorphic ones requires addressing the question of what constitutes human-ness. Humans are commonly believed to possess specific qualities that make this species different from other living organisms—for example, distinctive properties of humanness include specific physical features, such as faces, hands, or fully erect bodies (Di Salvo, Gemperle, & Forlizzi, 2005). Previous studies have demonstrated that human-shaped stimuli successfully activated the mental schema of the human body (e.g., De Bondt, van Kerckhove, & Geuens, 2018), and thus the human silhouette has been frequently used in experimental manipulations to elicit anthropomorphism (e.g., Hur et al., 2015; Kim & McGill, 2011; Mourey et al., 2017; Puzakova, Rocereto, & Kwak, 2013; Reavey et al., 2018).

In sum, autonomous movement should drive animism but not necessarily anthropomorphism, while visuals related to the human body may produce both modes of thinking. Given that movement is very simple to devise (particularly in online environments), animism might be considerably easier to activate because it requires less complicated cues than anthropomorphism (human-like faces, bodily gestures, or language are harder to depict than an autonomously moving object).

Animism and Superstitious Beliefs

From an evolutionary perspective, animism is often explained as a cognitive error that provides adaptive advantages (Haselton & Nettle, 2006; McDonald & Stuart-Hamilton, 2000). Specifically, an animistic mode of thinking is an erroneous perceptual process because one commits an error by assuming that an inanimate object is actually alive. However, animism does not necessarily yield negative consequences; rather, it is an adaptive mechanism that enables making safer or less costly judgments. For example, we more often tend to misperceive a stick as a real snake (a harmless and precautionary act) than to think that a real snake is a stick (a potentially harmful choice; Haselton & Nettle, 2006). Therefore, animism is deeply rooted in human culture, religion, and history and has been used by individuals for ages to identify potential allies, predators, risks, and opportunities at a minimum cost (Guthrie, 1993).

Detecting agents or signals of life in one's environment requires attentiveness and vigilance (Epley et al., 2008), and past research has already shown that the anthropomorphic mode of thinking is more likely to be activated when individuals are low trusters (i.e., they are watchful of possible risks and dangers [Toure-Tillery & McGill, 2015], feel powerless and face high risk (Kim & McGill, 2011), or are situated in unpredictable conditions (Watzl et al., 2010). These findings suggest that if people deal with uncertainty or are highly vigilant, they tend to use anthropomorphism as a response to human-like cues. A similar cognitive pattern of effects might be theorized with regard to the animistic mode of thinking: when faced with unpredictability or high risk, one should be more inclined to detect life (or intentionality) in the environment because perceiving something as alive provides a useful shortcut and explanation, particularly when anticipating an unknown and highly uncertain future. For example, if we are in a casino and lose several times in a row, we are more inclined to animate an object (e.g., a roulette ball or wheel) and blame it for our failures (e.g., the ball is deliberately avoiding the good spots on the wheel). Based on this reasoning, we suggest that attributing characteristics of living beings to inanimate objects is more likely to occur if one is superstitious.

Similarly to animism, superstitions are a form of cognitive error with adaptive functions and they manifest in an illusion of control over the environment (Haselton & Nettle, 2006). Superstitious people subjectively believe they can exert
influence over (objectively uncontrollable and unpredictable) phenomena by means of actions (e.g., knocking on wood, avoiding black cats) or items (e.g., carrying a lucky charm). Therefore, superstitions are based on beliefs in extraordinary and paranormal explanations that stand outside the rules of science or normative perceptions about reality (Vaidyanathan, Aggarwal, & Bakpayev, 2018). Superstitious beliefs are used to increase the predictability of one's life and surroundings (e.g., to bring about success or defuse bad luck); thus, they frequently serve as a perceptual strategy that allows individuals to cope with the environment (Hamerman & Johar, 2013; Kramer & Block, 2011).

Both superstitions and animism are cognitive errors that fulfill complementary functions. Superstitions help control one's environment (Hamerman & Johar, 2013; Haselton & Nettle, 2006), and they often become a source of information for evaluating a stimulus, particularly under uncertainty (Block & Kramer, 2009; Kramer & Block, 2008), while animism gives explanations and makes an environment less uncertain (Velasco, Yang, & Janakiraman, 2020). In other words, superstitious people want to control their environment (i.e., they want to increase its predictability), and animism offers them a cognitive means to do so by providing them with an explanation that reduces uncertainty (i.e., boosts predictability). As a result, we suggest that both superstitions and animism are likely to co-exist. More specifically, superstitious people are attuned to perceptible cues that might protect them from bad luck or increase their good luck; they are highly vigilant of external signals that supposedly enable them to control their environment (i.e., they tend to scan their surroundings for specific lucky or unlucky signs, such as ladders, numbers, four-leaf clovers, or black cats). Therefore, it is more probable for them to detect an animistic cue and interpret it. To summarize, when exposed to a stimulus with an animistic (vs. nonanimistic) cue, superstitious consumers will react by engaging in animistic thinking.

**H1.** When superstitious beliefs are made salient, an animistic cue is more likely to trigger animistic thinking than a non-animistic cue.

**Animism as a Mediator**

Given the lack of research on animism in marketing, one could infer certain insights from existing studies on anthropomorphism. However, the available findings are mixed. One stream of research has demonstrated a negative impact of anthropomorphized (vs. non-anthropomorphized) products on consumer preferences (Puzakova & Kwak, 2017), ad attitudes (Puzakova et al., 2013), and self-control (Hur et al., 2015). Overly humanized objects were found to reduce consumers’ comfort levels, making people feel uneasy, anxious, or averse (the phenomenon of uncanny valley; see Mori et al., 2012). For example, highly anthropomorphized medical robots produce higher embarrassment on patients’ part than non-anthropomorphized robots (Bartneck, Bleeker, Bun, Fens, & Riet, 2010); human-like (vs. machine-like) robots are perceived as warmer, but they are less liked (Kim, Schmitt, & Thalmann, 2019); and, in advertising, overt anthropomorphization was observed to lead to less favorable ad attitudes than subtle anthropomorphization (Reavey et al., 2018).

Nevertheless, much empirical work suggests that the anthropomorphic mode of thinking makes it easier for an individual to understand the humanized object as well as to empathize and bond with it. For instance, anthropomorphism drives the feeling of connectedness with nature and results in heightened conservation behavior (Tam, Lee, & Chao, 2013), facilitates social connection, and makes consumers less willing to replace anthropomorphized products (Chandler & Schwartz, 2010), increases trust toward autonomous vehicles (Waytz, Heafner, & Epley, 2014), makes products more preferable, particularly to socially excluded consumers (Chen, Wan, & Levy, 2017), and produces higher subjective vitality judgments among people who feel lonely or helpless (Chen et al., 2018).

Finally, two recent meta-analyses have concluded that anthropomorphic thinking leads to positive rather than negative consequences. First, Velasco et al. (2020) have found that consumers generally evaluated anthropomorphized (vs. nonanthropomorphized) products better, and uncertainty reduction might be a plausible mechanism behind this effect. Accordingly, anthropomorphic thinking helps familiarize an object (by using a familiar frame of humanness and social rules), which lowers uncertainty and thus enhances subsequent favorable predispositions toward the product. The second meta-analysis was conducted in the field of human–computer interactions and showed that anthropomorphism drove strong positive effects on intentions to use a robot (Blut, Wang, Wunderlich, & Brock, 2020).

One may assume that animism should work similarly to anthropomorphism via uncertainty reduction; in fact, the evolutionary perspective provides a very useful theoretical explanation for this process. More specifically, evolutionary researchers (e.g., Lowder & Gordon, 2015; New, Cosmides, & Tooby, 2007) have suggested that animistic thinking has evolved to help predict the behavior of other entities (such as animals or weather) and quickly detect opportunities (potential food), or dangers (potential predators). In other words, the environment was largely unpredictable to our ancestors, and, when something was moving in the nearby forest or bushes, it was beneficial to assume that the object was alive (a potential prey, predator, or mate) because the attribution of life increased the object’s predictability by limiting the options of how it might behave or respond (e.g., animals possess a limited number of behavioral responses: they can change their mind or location and attack or run away). In short, considering a moving object as being alive provides a coping strategy and gives a hint on how to deal with it. Such reduction of uncertainty can alleviate tension or anxiety and should, therefore, trigger positive responses. Consequently, animistic thinking should result in favorable evaluations, and our contemporary behaviors reflect this logic—that is, we tend to like animated stimuli better than nonanimated ones. For example, in advertising, animated ads produce more positive attitudes (Yoo, Kim, & Stout, 2004; Yoon & Kim, 2005) and are better memorized and
recognized than static ads (Kuisma, Simola, Uusitalo, & Oorni, 2010). Animated spokes-characters drive positive product attitudes among children (Neeley & Schumann, 2004). Moving food is perceived as fresher, more appealing, and better tasting than still food (Gvili et al., 2015; Gvili, Tal, Amar, & Wansik, 2017). Naturalistic movement increases robots’ likeability (Castro-Gonzalez, Admoni, & Scassellati, 2016). In sum, the attribution of living characteristics to inanimate entities should make these entities more predictable, and animism (if activated) should generate positive attitudes. In other words, once an animistic mode of thinking is activated, it should lead to more favorable responses toward a target object (i.e., a brand); however, given the predicted moderation (see H1), this path should be significant, particularly when superstitious beliefs are made salient.

Additionally, a positive brand attitude should become a driver for further behavioral responses, such as purchase intentions. This inference stems from traditional response hierarchy models and classic research on brand attitudes as mediators (MacKenzie, Lutz, & Belch, 1986). Thus, we propose the following:

H2. Animistic thinking mediates the proposed moderation effect of animistic cues and superstitions (H1) such that (a) it positively influences brand attitudes, which (b) leads to higher purchase intentions.

**Overview of Studies**

Two studies were conducted to test hypotheses H1 and H2. In Study 1, we ran a two (superstitions made salient: yes vs. no) by two (animistic cue: yes vs. no) between-subjects experiment. We found that superstitions and animistic cues increased animism (but not anthropomorphism) and led to positive inferences about brands. Study 2 was designed to replicate these findings but with different stimuli and measures—that is, we used a different mix of animistic cues, a different product category, and created real Facebook posts to increase the validity of our work. In Study 1, we manipulated only the negative superstitions, whereas in Study 2, we measured superstitious beliefs with a standardized scale to check whether our results held for people believing in negative and positive superstitions (e.g., breaking a mirror causes bad luck, but saying “fingers crossed” brings good luck). In an attempt to rule out possible confounds stemming from past consumer experiences with particular products, we used fictitious brands in both studies.

**Study 1**

**Stimuli Development and Manipulation Procedure**

We created a fictitious brand of cookies (Sweet'n'Roll) and developed materials that resembled standardized key visuals for this brand (meant for social media or a web page; see Appendix A). We used movement as a cue to elicit animism. Specifically, in the “yes animistic cue” condition, the cookie was spinning around with spontaneous accelerations and decelerations, while in the “no animistic cue” condition, the cookie was static. In addition, we pre-tested these stimuli on a sample of 193 respondents recruited on Amazon mTurk (40% females; age range: 24–66 years; United States-based native English speakers). We asked the participants to assess the extent to which they perceived the Sweet'n'Roll cookie as moving on its own (anchored by Not at all/Very much), and we arrived at results indicating a successful manipulation (M_{no animistic cue} = 4.74, SD = 2.09 vs. M_{yes animistic cue} = 5.63, SD = 1.53, F (1,191) = 11.14, p < .01).

To manipulate superstitions, we adapted the procedures from previous studies on peculiar beliefs and luck-related concepts (Block & Kramer, 2009; Jiang et al., 2009; Kramer & Block, 2008). We based our work on the following premise: Superstitions have to do with the subjective illusion that one can use various objects or actions to control luck (i.e., one can explain luck by attributing it to certain items or behaviors). For example, a four-leaf clover or a horseshoe (object) brings good luck, while black cats (object) bring bad luck; knocking on wood (action) decreases bad luck, while walking under a ladder or spilling salt (action) increases bad luck. Luck is the central concept when it comes to superstitions, and highly superstitious individuals believe that they can control luck via objects or actions. While luck and lucky events, days, or streaks (e.g., gamblers and athletes like to think that “this is my lucky day”) are, by definition, brought by chance, superstitious people think otherwise. In other words, they consider luck to be a controllable factor (even though they admit that this does not make sense rationally) and often attribute their success or failure to un/lucky items or behaviors (Jiang et al., 2009; Kramer & Block, 2008). As a consequence, to make superstitions salient, one has to manipulate un/lucky streaks so that respondents can attribute their failures (or successes) to something (e.g., the number 13, a broken mirror, or a horseshoe). Therefore, previous scholarly attempts to manipulate superstitions were predominantly based on lucky/unlucky words and number-association tasks or games (see, e.g., Block & Kramer, 2009; Jiang et al., 2009; Kramer & Block, 2008).

As a first step in our experiment, we recruited 207 respondents on Amazon mTurk and randomly assigned them to one of four groups. We began our manipulation of superstitions by informing participants that they would be shown words and numbers and that they would have to indicate which presented element was a word, a number, or neither. Next, the participants viewed 41 visual stimuli (one word or number at a time). In the “yes superstitions” condition, subjects were shown 20 superstitious numbers and terms (such as 13, Friday 13th, black cat, XIII) and 21 filler visuals (i.e., nonsense letter strings, such as BHNJ#, %$_#, or T^y&), while in the “no superstitions” condition, the participants saw 20 neutral numbers and words (such as Tuesday, Tuesday 19th, or 10; taken from Block & Kramer, 2009; Kramer & Block, 2008) and the same 21 filler visuals.

After watching and responding to the 41 visuals, individuals in the “yes superstitions” condition were asked to play a form of lottery (adapted from Jiang et al., 2009). More specifically,
we used the shell game mechanics (also known as the Three-card Monte or Find the Lady): Every subject was presented with a picture of three boxes that looked the same and informed that there was a ball hidden in one of them. Next, we required the participants to guess where the ball was. Each participant had three attempts, but, on every occasion, the boxes were immediately rearranged to “rig” the selection process. No matter which box was chosen, the answer was flashed as incorrect. This way, we manipulated an unlucky streak, and respondents could attribute their failure to the previously shown incorrect. This way, we manipulated an unlucky streak, and

Then, all subjects were randomly assigned to either the “yes animistic cue” or “no animistic cue” condition, and they continued with the questionnaire about the Sweet’n’Roll cookies. The participants watched the stimuli and responded to questions about the mediators (animism), dependent variables (brand attitudes, purchase intentions), manipulation, and attention checks.

Measures

Brand responses were measured with brand attitudes (three items adapted from Bergkvist & Rossiter, 2007 and anchored by Bad/Good, Unpleasant/Pleasant, Dislikable/Likable; α = 0.87) and purchase intentions (a question about the extent to which one agrees with the statement “I would like to buy Sweet’n’Roll cookies,” anchored by Completely disagree/ Completely agree). As animistic thinking is a two-step cognitive process (see our previous theoretical discussion), we measured it with two items that were expected to work sequentially (step 1: “To what extent do you think that Sweet’n’Roll is tried to be attributed with life properties?”; and step 2: “To what extent do you think Sweet’n’Roll has come alive?”; adapted from Aggarwal & McGill, 2007).

To check for the successful manipulation of the animistic versus the non-animistic cue, we used the same item as in our pretest. We also measured anthropomorphism with the following question: “To what extent do you perceive Sweet’n’Roll as a person?” (Not at all/Very much). The manipulation-check item for superstitions was taken from Jiang et al. (2009)—that is, the participants were asked to estimate how lucky they felt “right now” (anchored by Not at all/lucky/Very lucky). Similarly to Jiang et al. (2009), we also added the following question on happiness/sadness to check whether this emotion confounded the results: “How happy do you feel right now?” (on a scale from “Extremely unhappy” to “Extremely happy”). Additionally, we used two attention checks in the questionnaire: the item “I have never brushed my teeth” (anchored by Strongly disagree/Strongly agree), taken from Meade and Craig (2012), was placed in the middle of the questionnaire, and an open-ended question (“How do you feel right now?”) was placed at the end of the study. Finally, the individuals who answered “Strongly agree” to the bogus item and wrote nonsense responses (e.g., “Yes,” “THE,” “I agree”) to the open-ended question were excluded from further analysis.

Results

Manipulation Checks

As 15 individuals did not pass the attention checks and two participants did not finish the survey, the final sample comprised 190 subjects (36% females; age range: 23–69 years; M = 37.09; United States-based native English speakers). The participants assigned to the “yes superstitions” condition felt less lucky than those in the “no superstitions” condition (Myes superstitions = 5.18, SD = 1.63 vs. Mno superstitions = 5.60, SD = 1.23, F(1,186) = 3.71, p = .05). Animistic cues also worked as expected (Myes animistic cue = 6.10, SD = 1.07 vs. Mno animistic cue = 4.48, SD = 2.16, F(1,186) = 41.01, p < .01). No other main or interaction effects were observed (Fs < 1.52, ps > 0.21). These results indicate successful manipulations of both independent variables. Additionally, there were no effects on anthropomorphism (Fs < 2.32, ps > 0.12) and subjective feeling of un/happiness (Fs < 0.85, ps > 0.35).

Main Analysis

First, we ran the analysis of variance (ANOVA) to check whether animistic cues and superstitions had a direct impact on subsequent brand responses (the means and standard deviations for all experimental conditions are provided in Appendix B). We found no main and interaction effects on brand attitudes (Fs < 2.45, ps > 0.11) and purchase intentions (Fs < 2.19, ps > 0.14).

Next, we conducted a moderated serial mediation to test our hypotheses (using the PROCESS macro, model 83 [Hayes, 2018]). The animistic cue (yes vs. no) served as an independent variable; superstitions (yes vs. no) were a moderator; animistic thinking step 1, animistic thinking step 2, and brand attitudes were inserted into the model as serial mediators, while purchase intentions were included as a dependent variable. We found a significant interaction effect of the animistic cue and superstitions on animism (B = 1.02, SE = 0.48, t = 2.09, p = 0.03). Specifically, when superstitions were made salient, the animistic cue resulted in higheranimism than the non-animistic cue (B = 1.02, SE = 0.34, t = 2.93, p < 0.01), while no such effect could be observed in the “no superstitions” condition (B < −0.01, SE = 0.34, t < −0.01, p = 0.99). Also, animism generated more favorable brand attitudes (B = 0.20, SE = 0.06, t = 2.90, p < 0.01), which, in turn, produced higher purchase intentions (B = 0.65, SE = 0.06, t = 10.48, p < 0.01). We found no other significant paths, and the index of moderated mediation was 0.11 (BootSE = 0.08, BootLLCI = 0.00, BootULCI = 0.32). These findings provide support for both H1 and H2.

Interestingly, when we inserted anthropomorphism into the model as a mediator (instead of animism), the effects of the animistic cue on anthropomorphic thinking and brand responses were no longer observable (|t| < 1.32, ps > 0.18). We obtained similar results when we ran model 82 to test parallel mediation: animistic cues had a positive effect on animism (B = 0.50, SE = 0.24, t = 2.02, p = 0.04) but no effect on anthropomorphism (B = −0.10, SE = 0.28, t = −0.36, p = 0.71). These results offer empirical evidence for distinguishing
animism from anthropomorphism and demonstrate that animistic cues elicit not the anthropomorphic but the animistic mode of thinking.

Discussion

As Study 1 has revealed, movement alone works as a viable animistic cue and can successfully trigger animism. In line with H1, our experiment demonstrates that superstitions facilitate animistic thinking, which constitutes the first piece of empirical evidence for the link between these two commonly committed cognitive errors. As predicted in H2, animism generates positive outcomes by encouraging favorable brand attitudes and purchase intentions.

The idea behind Study 1 was to also investigate whether animistic cues can drive anthropomorphic mode of thinking. Our experiment showed that movement triggered perceptions of life but not of humanness, providing an initial empirical test for the distinction between animism and anthropomorphism.

Given that Study 1 employed very simplistic stimuli, one may wonder whether animistic (but not anthropomorphic) thinking could be elicited by complex visuals that contain more than simple (ostensibly meaningless) movement. Therefore, we conducted Study 2 to test this effect and to validate our findings with a more diversified set of visuals.

Study 2

We ran a series of one-factor experiments and manipulated three different animistic cues that combined movement with additional meanings. We used a fictitious dairy-product brand and created real Facebook pages as stimuli. Therefore, we could investigate the effects of more nuanced (and more realistic) messages than in Study 1, which increased the overall validity of our work. Furthermore, we measured the superstitious beliefs moderator, including both positive and negative superstitions.

Stimuli Development

To develop more complex animistic cues with meaningful movement, we searched for activities that would not be typical of inanimate objects but rather shared by animals and humans. Eventually, we selected two basic occasions when living creatures move in a meaningful way: when playing and when enacting social rituals. Importantly, both play and rituals are translatable into online environments and content strategies, particularly in social media advertising (Tafesse & Wien, 2017).

Play is a voluntary, nonserious, and enjoyable activity, often based on certain rules and executed within temporal and spatial boundaries for fun, entertainment, or to reduce boredom (Salen & Zimmerman, 2004). In an online context, there are many possible ways to offer consumers opportunities to play: from simple contests, sweepstakes, and sales promotions (Gavilanes, Flatten, & Brettel, 2018) to more advanced genres such as alternate reality games or massive multiplayer games. The most frequently encountered forms of play in digital campaigns involve riddles, trivia quizzes, puzzles, or online arcade games (e.g., a Pac-Man game for Orbit).

Importantly, spontaneous play is not unusual for various types of nonhominid animals, such as dogs, wolves (Cafazzo et al., 2018), dairy calves (Bertelsen & Jensen, 2019), and even chickens (Liu, Torrey, Newberry, & Widowski, 2020). Some species (e.g., macaques and chimps) have been found to use transitive inference and solve complex riddles without reward, presumably for fun (Clark & Smith, 2013; Martin, Biro, & Matsuzawa, 2017). For animals, the process of solving puzzles also serves as a way to manufacture innovative tools (e.g., Goffin's cockatoo [Auerberg, Szabo, von Bayern, & Kaelnık, 2012]). Thus, humans are not the only ones who engage in more or less complicated forms of play.

A ritual is a type of symbolic behavior commonly encountered among both humans and animals. A ritual consists of a meaningful and repeatable sequence of actions that are performed to familiarize something or establish the meaning of a new situation or event (McCracken, 1986). In other words, rituals are used to assign meaning and make sense of important moments in one's life (e.g., rites of passage). In marketing, a ritual is often associated with the process of consumption or purchase (e.g., the three-step ritual for Oreos—twist, lick, dunk—or the pouring ritual for Stella Artois) to increase the product's importance and value for a consumer. Ritualized behavior is not exclusive to humans as animals have been observed to perform various forms of courtship, mating, and funeral rituals as well as other ceremonial acts. For example, elephants enact some kind of burying rites—that is, they carry corpses of dead animals and cover them with leaves, flowers, rocks, mud, or even food (Douglas-Hamilton & Douglas-Hamilton, 1975), and they also search for skulls and bones as if visiting dead conspecifics (McComb, Baker, & Moss, 2006). Chimps have been observed to perform repeated behaviors related to stone throwing, hurling, and banging, eventually building accumulations of rocks in hollow trees (Kühl et al., 2016); moreover, their rain dancing (vigorous appreciation of rain or waterfalls) and nest-making procedures were also recognized as species-specific (proto)rites (Tennie & van Schaik, 2020). In ethology, ritualization is commonly encountered and generally considered beneficial because it makes a particular behavior more conspicuous and less ambiguous (Petak, 2019), which is also true for humans.

To evaluate complex stimuli in relation to play and ritual in our empirical test, we first created a fictitious brand of yogurt, Yault. We designed Yault as a low-fat functional dairy product that contains natural probiotics, thus helping digestion and lowering one's sugar cravings. Then, we constructed experimental stimuli in the form of Facebook posts published by Yault. In one set of visuals, we manipulated the animistic cues with a moving bottle of Yault and a three-step ritual (shake, unseal, remove the cap), while in the other set we manipulated the animistic cues with a moving bottle of Yault and a playful riddle. Control messages were identical to the experimental ones but contained no animistic cues (i.e., no movement, riddles, or rituals; see Appendix A).
Furthermore, we decided to test an additional set of cues to more thoroughly distinguish animism from anthropomorphism. To elicit anthropomorphic thoughts among participants, prior studies have often used embodiment—that is, they incorporated human morphological features, such as eyes, mouth, and arms, into the tested product to make it look like a human (e.g., Landwehr et al., 2011; Maeng & Aggarwal, 2017). As anthropomorphism usually involves animistic thinking but animistic thinking does not necessarily entail anthropomorphism, images of human or human-like representations should evoke either both modes simultaneously or merely animism. Therefore, for our third set of stimuli, we depicted anthropomorphic brand characters with moving legs, arms, and eyeglasses in the “yes animistic cue” condition and used the same picture except without motion and human attributes in the “no animistic cue” condition (see Appendix A).

Pretests

We pretested our stimuli on a group of 277 participants (160 women; age range: 20–57 years; location: the United Kingdom and the United States), randomly drawn from the databases of a research company. Each stimulus was evaluated with three items that described the three animistic cues (play: “This post offers its fans/followers an opportunity to play online”; ritual: “This post depicts a ritual that is specially designed for this brand”; embodiment: “This post depicts a fictitious character specially designed for this brand”). We expected that particular animistic cues would lead to significant differences regarding the corresponding items while providing non-significant results in relation to the remaining items. The results showed that the animistic components worked as expected and did not confound one another (see Table 1). The participants were also asked to evaluate the message’s production quality and its credibility as a Facebook post (a single 7-point question adapted from Brown, Bhadury, & Pope, 2010). All the means were above the scale midpoint, and no significant differences were found between the messages (all $p_\text{s} > 0.41$, $F_\text{s} < 0.66$).

Procedure and Measures

We drew another sample of respondents from the databases held by a research company, and we randomly assigned each participant to one of three treatment and three control conditions. In total, 231 subjects (116 women; age range: 20–50 years; native English speakers) took part in our experiment. They were asked to watch the stimuli (exposure was equalized to a forced minimum of 20 s) and respond to our scales. Brand attitudes ($\alpha_\text{s} > 0.91$), purchase intentions, and animistic thinking were measured with the same scales as in Study 1. Superstitious beliefs were evaluated with the 6-item 7-point scale ($\alpha_\text{s} > 0.81$) devised by Wiseman and Watt (2004). Animistic manipulation and production quality were measured with the same questions as in the pretest; we also added an item about anthropomorphism to test the latter’s distinctiveness from animism (same scale as in Study 1).

### Table 1
Pretest Results (Study 2).

| Animistic cues (“yes” and “no” groups) | Sample size (M = X.XX) | Age range | Gender | ANOVA results |
|--------------------------------------|------------------------|-----------|--------|---------------|
| Ritual                               | n = 92                 | 20–57     | 58% male | Ritual: M = 5.00 (SD = 2.13) vs. M = 2.92 (SD = 2.26), $F(1,90) = 19.96$, $p < 0.01$ |
| Play                                 | n = 107                | 21–50     | 59% male | Play: M = 4.34 (SD = 2.17) vs. M = 2.53 (SD = 2.02), $F(1,105) = 19.72$, $p < 0.01$ |
| Embodiment                           | n = 78                 | 20–50     | 53% female | Embodiment: M = 4.18 (SD = 2.34) vs. M = 1.45 (SD = 1.03), $F(1,76) = 45.08$, $p < 0.01$ |

### Table 2
Manipulation check results (Study 2).

| Animistic cues (“yes” and “no” groups) | Sample size (M = X.XX) | Age range | Gender | ANOVA results |
|--------------------------------------|------------------------|-----------|--------|---------------|
| Ritual                               | n = 82                 | 20–50     | 62% female | Ritual: M = 4.74 (SD = 2.13) vs. M = 2.76 (SD = 2.06), $F(1,80) = 17.97$, $p < 0.01$ |
| Play                                 | n = 89                 | 20–50     | 41% female | Play: M = 4.51 (SD = 2.19) vs. M = 3.33 (SD = 1.97), $F(1,87) = 7.13$, $p < 0.01$ |
| Embodiment                           | n = 60                 | 20–50     | 46% female | Embodiment: M = 4.55 (SD = 0.82) vs. M = 1.23 (SD = 0.56), $F(1,57) = 324.30$, $p < 0.01$ |

Other animistic cues

- Play: $F(1,105) = 29.78$,
- Ritual: $F(1,87) = 19.96$,
- Embodiment: $F(1,76) = 8.96$,

Language ($M = 1.00$ vs. $M = 1.30$; $F(1,57) = 4.64$), ritual ($M = 1.00$ vs. $M = 1.37$; $F(1,57) = 6.66$), humor ($M = 2.90$ vs. $M = 1.23$; $F(1,57) = 29.78$).
Results

Manipulation Check

The ANOVA results showed that the manipulation of animistic cues was successful in all groups (see Table 2). One animistic cue revealed additional differences for more than one manipulation check item, which is why we included these items as covariates in the final analysis.

Main Analysis

First, we conducted three regression analyses using the PROCESS macro (model 1, Hayes, 2018) to check whether superstitious beliefs and animistic cues, combined with play, ritual, and embodiment, had direct effects on subsequent responses to brands (means and standard deviations for the animistic cue manipulations are provided in Appendix B). As in Study 1, we found no main and interaction effects on brand attitudes and purchase intentions (all models were non-significant with $F$s < 2.00 and $p$s > 0.08). Next, we ran a moderated serial mediation to investigate the impact of animistic cues on subsequent reactions to brands via animism. We built three models (one for each animistic cue) using the PROCESS macro (model 83, Hayes, 2018). In line with H1, we found a significant interaction effect between superstitious beliefs and the three animistic cues on animistic thinking (Fig. 2). Animism was activated among individuals who scored highly on superstitions, while no such effect was detected among the participants who did not believe in paranormal explanations or behaviors. In all three cases, the Johnson-Neyman significance region was above point 2.00 on the 7-point scale (Table 3).

The findings also support H2, which states that animistic thinking mediates the effect of animistic cues on brand attitudes (H2a) and, subsequently, on purchase intentions (H2b). More specifically, we found a positive mediation effect of three cues (Fig. 2). Furthermore, animistic thinking fully mediated the impact of the messages that involved play and embodiment. Similarly to Study 1, we observed no effects of animistic cues on anthropomorphism ($|t| < 1.70$, $p$s > 0.09). In addition, when we ran model 82, neither playful riddle ($B = 0.44$, $SE = 0.30$, $t = 1.46, p = .14$), ritual ($B = 0.32, SE = 0.26, t = 1.20, p = .23$), nor embodiment ($B = 0.23, SE = 0.36, t = 0.65, p = .51$) succeeded in activating anthropomorphic thoughts; rather, these factors triggered animism ($t$s > 3.09, $p$s < 0.01). The results provide further evidence that perceptions of humanness are difficult to elicit, while animistic thinking does not necessarily entail anthropomorphism.

The conditional effects of animistic cues on animistic thinking (step 1) at different values of the moderator (superstitious beliefs).

| Animistic cue | Superstitious beliefs | Effect | SE  | $t$  | $p$  |
|---------------|-----------------------|--------|-----|------|------|
| Ritual        | 16th percentile (M = 1.50) | 0.53   | 0.62| 0.85 | 0.39 |
|               | Johnson-Neyman point (M = 2.26) | 0.96   | 0.48| 1.99 | 0.05 |
|               | 84th percentile (M = 4.66) | 2.29   | 0.55| 4.15 | < 0.01 |
| Play          | 16th percentile (M = 3.16) | 0.37   | 0.55| 0.67 | 0.50 |
|               | Johnson-Neyman point (M = 4.06) | 0.84   | 0.42| 1.98 | 0.05 |
|               | 84th percentile (M = 6.43) | 2.07   | 0.65| 3.32 | < 0.01 |
| Embodiment    | Johnson-Neyman point (M = 2.36) | 1.20   | 0.60| 2.00 | 0.05 |
|               | 16th percentile (M = 3.10) | 1.64   | 0.44| 3.71 | < 0.01 |
|               | 84th percentile (M = 5.00) | 2.78   | 0.41| 6.76 | < 0.01 |

Table 3

Fig. 2. The effects of animistic cues (ritual, play, embodiment) on animistic thinking, brand attitudes, and purchase intentions.
Discussion

Study 2 replicated the findings from Study 1 and provided further empirical support for H1 and H2. More specifically, it showed that animistic cues activated animistic thinking, particularly among superstitious consumers (regardless of the kind of superstitions). Again, we found that animism benefited brand attitudes and subsequently increased purchase intentions.

Our experiments deliver additional data suggesting that animism is a different phenomenon from anthropomorphism and that people do not spontaneously anthropomorphize but rather animate objects (i.e., embodiment cues activated perceptions of life rather than humanness). Furthermore, Study 2 offers practical insights into animism and animistic cues. It reveals that combining movement with more complex meanings (such as playful riddles or rituals) does not hinder animistic thinking.

General Discussion

Animism is broader than anthropomorphism and represents a common cognitive error enacted by many consumers, whereby they perceive inanimate objects as endowed with life. Despite its prevalence, the animistic mode of thinking has not received enough attention from scholars, particularly in digital marketing. Therefore, we conducted a series of experiments to examine this phenomenon and its impact on inferences about brands on social media.

Past research often conflated animism with anthropomorphism (Aggarwal & McGill, 2007; Beran et al., 2011; Chandler & Schwartz, 2010; Mourey et al., 2017), but our studies demonstrate empirically that these are two separate modes of thinking. In our experiments, we tested the extent to which participants considered the same object as alive and as a person, and our stimuli provoked animistic rather than anthropomorphic thoughts. These findings form an important contribution because they open up a new avenue of research and might explain the inconsistencies in prior investigations on anthropomorphism. More specifically, our results add to the stream of marketing literature that shows how difficult it is to elicit humanness to inanimate objects unless specifically coaxed or otherwise encouraged to do so (see, e.g., Avis et al., 2014; Avis, 2011).

Our studies offer important insights into the triggers of animism. Past research has suggested that movement alone works as a viable cue for animistic thinking because autonomous motion implies life (McDonald & Stuart-Hamilton, 2000; Nielsen et al., 2015; Piaget, 1965; Santos et al., 2008; Tremoulet & Feldman, 2000; Tremoulet & Feldman, 2006). We managed to replicate this effect with advertising stimuli, revealing that various forms of moving messages can activate animism in an online environment. Therefore, our research contributes to the current marketing literature and practice by showing that animistic thinking can be elicited by easily conceivable cues that either contain simple movement or combine movement with additional meanings (such as playful riddles).

Prior investigations have extensively exploited embodiment as an anthropomorphic cue. However, our study shows that human-like body images primarily evoke animistic thoughts. This finding offers further evidence that it is easier to elicit animism than anthropomorphism and that one can use a great variety of messages to produce perceptions of life.

Our final contribution stems from testing superstitious beliefs as a new important variable that can explain consumer behavior on social media. Although superstitions are a common perceptual error and are often used to cope with the environment, scholars have only recently begun treating superstitions as possible explanations for diverse cognitive phenomena (e.g., decision-making under uncertainty [Dolansky et al., 2011; Jiang et al., 2009]). However, superstitions have never been investigated in conjunction with other cognitive errors, such as animism. In our experiments, we demonstrated that the positive effects of animistic cues become evident when it comes to consumers who hold superstitious beliefs, and we managed to replicate these findings across various messages and product categories. Consequently, we have provided the first experimental evidence for the link between superstitious beliefs, animism, and moving objects, particularly in relation to social media advertising.

Future research could build on the concept of animism and search for its other boundary conditions. For instance, making consumers aware of the cognitive error that they commit when perceiving something as alive might reduce the animism effect, while allowing simple or spontaneous inferences (e.g., via cognitive load) might improve said effect. Scholars could also further investigate uncertainty reduction (i.e., increasing predictability) as an additional process variable and validate this phenomenon as a mechanism behind animistic thinking. Finally, our study could be replicated using other products, and our selection of animistic cues could be further validated with a larger data set.

Practical Implications

For practitioners, distinguishing animism from anthropomorphism provides an additional mechanism that can be exploited in marketing communication endeavors. As past research has shown, anthropomorphism may sometimes produce unfavorable attitudes (Puzakova et al., 2013; Puzakova & Kwak, 2017), particularly when it is overt (Reavey et al., 2018), as highly humanized objects are commonly considered unnerving (Mori et al., 2012). However, our results indicate that animistic thinking has positive brand effects and thus constitutes a safer option for online campaigns than anthropomorphic thinking. In sum, anthropomorphism is likely to bear some risks in relation to ads and products, while animism seems to be devoid of negative consequences.

Animism has broader applications than anthropomorphism, as it can be triggered with easily conceivable cues, such as simple movement. As a result, animism can be comfortably exploited in online campaigns because social media (unlike the outdoors,
print, or radio) serve as a suitable environment for meaningful motion, moving images, animated products, and interactive agents (such as the Aflac Duck, Charmin Bears, or disembodied chatbots). Additionally, the concept of animism can be exploited beyond social media when marketing products that move autonomously (such as cars, cleaning devices, or medical robots), whose overt humanization might provoke negative consumer responses.

Based on our results, superstitions appear to be a new and managerially relevant segmentation variable that may become helpful when considering social media choices and placements. As superstitious people are likely to respond to animistic cues, they could be more efficiently targeted with campaigns that depict brands as living entities. Given the wide range of information that social networking sites offer to their advertisers (Dewey, 2016), it is not difficult to identify individuals who rely on superstitions or face situations involving uncertainty, stress, and a high risk of failure (e.g., a car purchase, investment, sports games). As a result, our findings should be particularly useful for branding campaigns for products and services that are traditionally addressed to superstitious consumers, such as jewelry (e.g., lucky charms and bracelets), lingerie (e.g., blue wedding garters), insurance, sports equipment, or airline tickets (for figures on the lost business due to Friday 13th, see Block & Kramer, 2009). Consumption in these markets is associated with luck, fate, or hazard and, therefore, might be heavily impacted by magical thinking, religiosity, and superstitious beliefs, all of which evidently have great power to frame further responses and behaviors toward brands.

Declaration of Competing Interest

None.

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Appendix A. Supplementary data

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